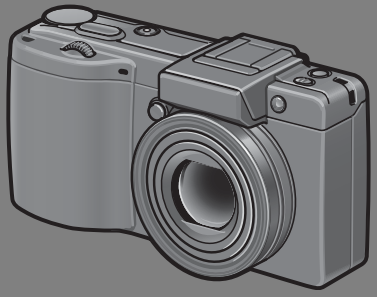
Camera User Guide

SEA&SEA 2G



The serial number of this product is given on the bottom face of the camera.

Basic Operations

If you are using the camera for the first time, read this section.

This section provides a basic overview of how to turn on the camera, take pictures and play back pictures.

Advanced Operations

Read this section when you want to learn more about the different camera functions.

This section provides more detailed information about the functions used to take pictures and play back pictures, as well as information on how to customize the camera settings, print pictures, and use the camera with a computer.

The rechargeable lithium-ion battery needs to be charged before use. The battery is not charged at the time of purchase.

Preface

This manual provides information on how to use the shooting and playback functions of this product, as well as warnings on its use.
To make the best use of this product's functions, read this manual thoroughly before use. Please keep this manual handy for ease of reference.

Safety Precautions	For the safe use of your camera, be sure to read the safety precautions thoroughly.
Test Shooting	Please be sure to do some test shooting to make sure it is recording properly before normal use.
Copyright	Reproduction or alteration of copyrighted documents, magazines, music and other materials, other than for personal, home or similarly limited purposes, without the consent of the copyright holder is prohibited.
Exemption from Liability	We assumes no liability for failure to record or play back images caused by malfunction of this product.
Radio Interference	Operating this product in the vicinity of other electronic equipment may adversely affect the performance of both devices. In particular, operating the camera close to a radio or television may lead to interference. If interference occurs, follow the procedures below. • Move the camera as far away as possible from the TV, radio or other device. • Reorient the TV or radio antenna. • Plug the devices into separate electrical outlets.

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Using These Manuals

The following two manuals are included with this camera.

"Camera User Guide" (This booklet)

This guide explains the usage and functions of the camera. It also explains how to install the provided software on your computer.

"Software User Guide" (PDF file)

The "Software User Guide" is available in the following folders on the provided CD-ROM.
This guide explains how to download images from the camera to your computer and display and edit them on your computer.

Each language has its own "Software User Guide" in its respective language folder. The "Camera User Guide" for languages other than Japanese and English are also included in these folders.

To copy the User Guide onto your hard disk, copy the PDF file from the respective folder directly to your hard disk.

The camera is provided with the Irodio Photo & Video Studio software that allows you to display and edit images on your computer. For how to use Irodio Photo & Video Studio, see the displayed "Help".

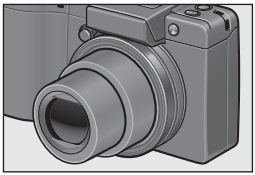
For more information on Irodio Photo & Video Studio, contact the Customer Support Center below.

North America (U.S.)	TEL: (Toll Free) +1-800-458-4029
Europe	
UK, Germany, France and Spain:	TEL: (Toll Free) +800-1532-4865
Other Countries:	TEL: +44-1489-564-764
Asia	TEL: +63-2-438-0090
China	TEL: +86-21-5385-3786

Business hours: 9:00 AM to 5:00 PM

Key Features

* The illustrations shown in this manual may differ from the actual items.

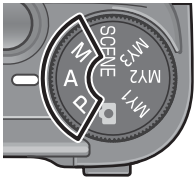


Wide-angle zoom lens can capture wide-angle pictures

This camera has a compact body only 25 mm thick, featuring a 24-72 mm* 3× optical zoom lens that covers a wide range of shooting. The wide-angle lens is great for capturing buildings, landscape scenes, group photos, and more.
*Equivalent to that on a 35 mm camera

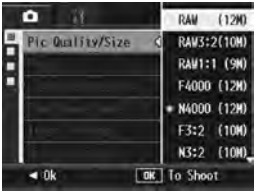
Camera shake correction function reduces blurring (P.131)

The camera comes with a camera shake correction function to allow you to take clearer pictures with minimized blurring even indoors, at night and in other situations where camera shake may occur.



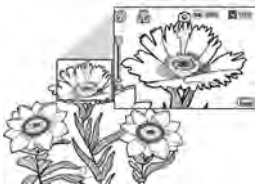
Aperture priority mode, manual exposure mode, and program shift mode for fine-tuned adjustments

You can manually set the aperture value and shutter speed. This small, compact, and lightweight camera has advanced modes that rival those of digital SLR cameras.



CCD with approx. 12.1 effective megapixels and RAW mode capable of recording up to 5 consecutive shots (P.99)

The camera has a CCD with approx. 12.1 million effective pixels to ensure high-resolution images. With RAW mode, you can also use the camera's image processing engine to save the raw picture data as a DNG file (up to five consecutive images) before converting it to JPEG format. This makes it possible to perform high quality image processing on a computer with minimal image quality deterioration (requires image editing software that supports DNG files). When taking pictures in RAW mode, a JPEG file based on the DNG file is recorded at the same time.

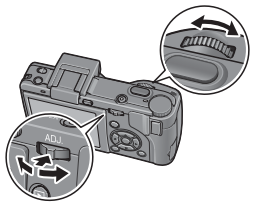


Macro shooting (P.42) at 1 cm, plus close-up flash shooting (P.44) at 20 cm for wide-angle and 15 cm for telephoto shots

The camera is equipped with close-up functions that allow you to take pictures at a distance of only 1 cm for the wide-angle side and 4 cm for the telephoto side, from the front of the lens to the subject.
Since the flash supports distances of only 20 cm for the wide-angle side and 15 cm for the telephoto side, you can also take clear macro shots even under low light conditions.

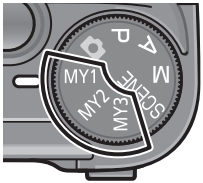
Electronic level function to help keep the image level (P.60)

The camera is equipped with an electronic level function that is useful for keeping the image level when taking pictures of scenery or buildings. The camera uses a level indicator displayed on the picture display and a level sound to let you know whether the image is level.



Up-down dial and ADJ. lever for faster and easier operations (P.20)

You can use the up-down dial and ADJ. lever to quickly and easily make the shooting settings and various menu operations.
You can also press the ADJ. lever to easily select ADJ. mode (P.66) and make various shooting settings.

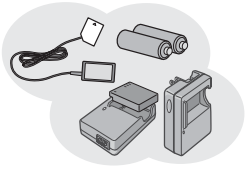


Easily customize your favorite shooting settings with my settings mode (P.93)

You can customize three groups of settings, and then turn the mode dial to MY1/MY2/ MY3 to shoot with those registered settings.

Fn (Function) buttons enables easy mode switching with a single push of the button (P.189)

When a function is assigned to either of the two Fn (Function) buttons, you can perform the assigned function, such as switching to JPEG mode or RAW mode, switching to auto focus or manual focus, or switching to color or black-and-white mode, simply by pressing the Fn1/Fn2 button. You can also assign various other shooting settings to the Fn1/Fn2 button.

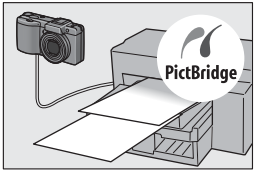


Compatibility with AAA batteries eliminates concerns about the batteries running out while you're traveling (P.26)

In addition to the specified large-capacity rechargeable lithium-ion battery (sold separately) for long periods of shooting and playback, the camera is also compatible with AAA alkaline batteries, AAA Oxyride batteries, and AAA nickel-metal hydride batteries. This eliminates concerns about the batteries running out while you're traveling.

Irodio Photo & Video Studio software for browsing, viewing, and editing still images and movies (P.215)

This software enables you to view, organize, and perform simple editing (supporting DNG file format) of shot images. You can also use the video editor function to create movies using still images, video clips, audio, and music files.



Direct printing without the use of a computer (P.171)

A direct print-compatible printer can be connected to the camera with the USB cable to directly transfer images to the printer. This allows for easy printing without using a computer.
You can also print reports.

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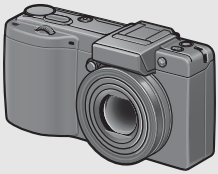
Packing List

Open the package and make sure all the items are included.

* The actual appearance of items included may differ.

Digital Camera

The serial number of the camera is provided on the bottom face of the camera.

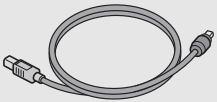


Hot Shoe Cover

Included with the camera.

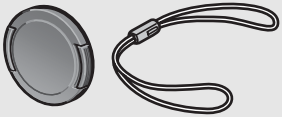
USB Cable (mini-B type)

Used to connect the camera to a computer or direct print-compatible printer.



Handstrap

Lens Cap
Lens Cap Strap



AV Cable

Used to view your images on a TV.

Camera User Guide

(This booklet)

CD-ROM (☞P.212)

The provided software and the "Software User Guide" are included on this CD-ROM. Although the software included in the CD-ROM cannot be used with Macintosh, it is possible to display the Software User Guide. (Only on computers with Acrobat installed.)

Caution

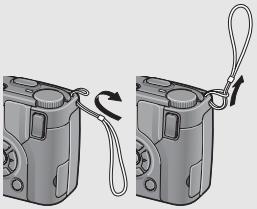
The CD-ROM supports the following languages. Operations are not guaranteed on operating systems with languages other than those listed below.

English, French, German, Spanish, Italian, Chinese (Traditional, Simplified), Korean

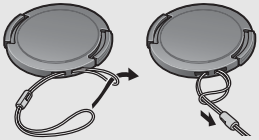
Note

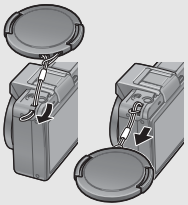
Attaching the handstrap to the camera

Thread the small end of the strap through the strap eyelet on the camera and loop the ends as shown.



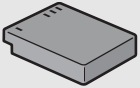
Attaching the lens cap strap to the camera



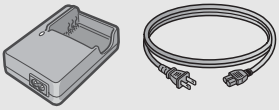


Optional Accessories

Rechargeable Lithium-ion Battery



Battery Charger



AC Adapter

Used for power supply from a household outlet to the camera. Use this adapter for long periods of playback or when transferring images to a computer.

Recommended Ricoh Accessories

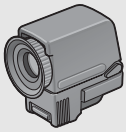
The camera can be used with the following recommended accessories when it is used alone.

Caution----------

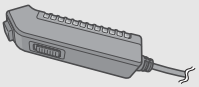
These recommended accessories cannot be used with DX-2G.

LCD Viewfinder (VF-1)

LCD viewfinder attaches to the hot shoe.



Cable Switch (CA-1)

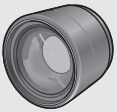


Self Retaining Lens Cap (LC-1)

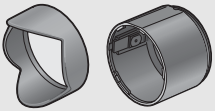
Opens and closes automatically according to the lens movement.

Wide Conversion Lens (DW-6)

Tele Conversion Lens (TC-1)



Hood & Adapter (HA-2)



Removing/attaching the ring cap ----------

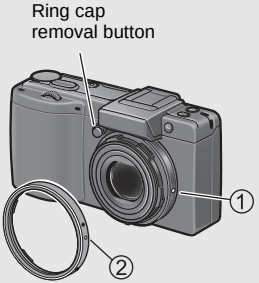
Remove the ring cap when using the wide conversion lens (DW-6), tele conversion lens (TC-1), self retaining lens cap or hood & adapter (HA-2).

Removing the ring cap

With the ring cap removal button pressed, turn the ring cap counterclockwise while the camera is turned off and remove from the camera body.

Attaching the ring cap

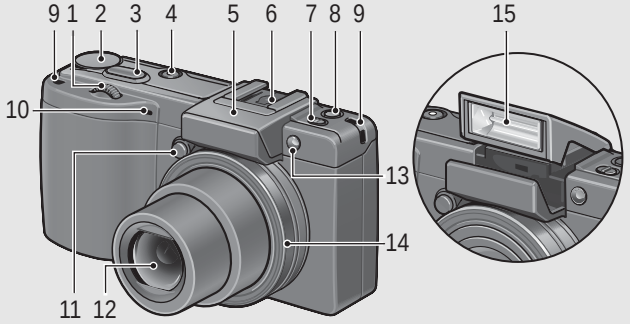
With the camera turned off, align the marking on the ring cap (②) with the marking on the camera body (①) and turn the ring cap clockwise until it clicks.



Names of Parts

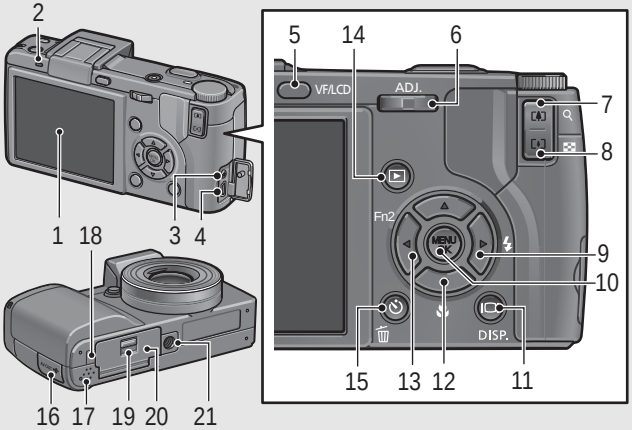
Camera

Front View



	Item Name	Refer to
1	Up-down Dial	P.20
2	Mode Dial	P.19
3	Shutter Release Button	P.36
4	POWER Button	P.32
5	Flash Cover	P.44
6	Hot Shoe	P.244
7	ϟ (Flash) OPEN Switch	P.44
8	Fn1 (Function 1) Button	P.71
9	Strap Eyelet	P.13
10	Microphone	-
11	Ring Cap Removable Button	P.16
12	Lens	P.36
13	AF Auxiliary Light	P.47, 197
14	Ring Cap	P.16
15	Flash	P.44

Rear View

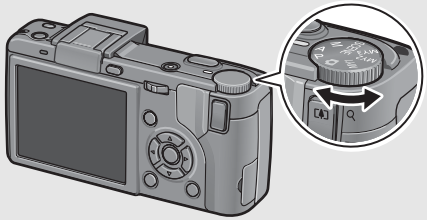


	Item Name	Refer to
1	Picture Display	P.22
2	Auto Focus/Flash Lamp	P.32, 39, 44
3	AV Output Terminal	P.169
4	USB Terminal	P.172, 221, 222, 225
5	VF/LCD button	P.57
6	ADJ. Lever	P.66
7	[T] (Telephoto)/🔍 (Enlarged View) Button	P.41, 51
8	[W] (Wide-angle)/▪ (Thumbnail Display) Button	P.41, 50
9	▶/ϟ (Flash) Button	P.44
10	MENU/OK Button	P.97, 150, 178
11	DISP. Button	P.57
12	▼/🌷 (Macro) Button	P.42
13	◀/Fn2 (Function 2) Button	P.71
14	▶ (Playback) Button	P.48
15	🗑 (Delete)/⏲ (Self-timer) Button	P.53, 47
16	Terminal Cover	P.169, 172, 221, 222, 225
17	Speaker	P.148
18	Power (DC input) Cable Cover	P.241
19	Release Lever	P.30, 241
20	Battery/Card Cover	P.30, 241
21	Tripod Screw Hole	P.237

How to Use the Mode Dial

Set the mode dial to the desired mode before shooting still images or movies.

1 Turn the mode dial to the symbol of the function you want to use.

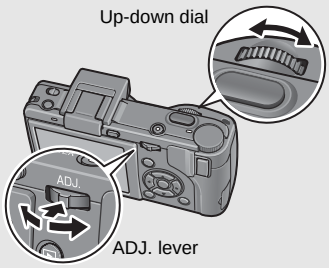


Mode Dial Symbols and Descriptions

Symbol	Function	Description	Refer to
📷	Auto Shooting Mode	Automatically sets the optimal aperture value and shutter speed depending on the subject.	P.38
P	Program Shift Mode	Allows you to adjust the combination of aperture value and shutter speed.	P.86
A	Aperture Priority Mode	Allows you to set the aperture value, and then the camera automatically sets the optimal shutter speed.	P.81
M	Manual Exposure Mode	Allows you to manually set the aperture value and shutter speed.	P.83
SCENE	Scene Mode	Allows you to shoot with settings optimized for the shooting scene. You can also shoot movies.	P.88
MY1, **MY2**, **MY3**	My Settings Mode	Allows you to shoot using the settings registered in [Reg. My Settings].	P.93

How to Use the Up-down Dial and ADJ. Lever

You can use the up-down dial and ADJ. lever to easily perform various operations that are usually done using the ▲▼◀▶ buttons.
You can rotate the up-down dial as shown here.
You can press the ADJ. lever to the left and right and press the center.



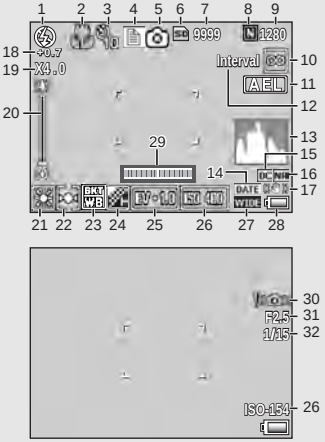
You can use the up-down dial and ADJ. lever to perform the following operations.

Mode/Display	Description		Refer to
	Up-down Dial	ADJ. Lever	
Select ADJ. Mode	-	Press the center to select ADJ. mode.	P.66
ADJ. Mode	Same as ▲▼ buttons.	Press to the left and right: Same as ◀▶ buttons. Press the center: Same as MENU/OK button.	P.66
Aperture Priority Mode (A)	Allows you to change the aperture value.	-	P.81
Manual Exposure Mode (M)	Allows you to change the aperture value.	Allows you to change the shutter speed.	P.83
Program Shift Mode (P)	Allows you to adjust the combination of aperture value and shutter speed.	-	P.86
Shooting/Playback/ Setup Menu	Same as ▲▼ buttons.	Press to the left and right: Same as ◀▶ buttons. Press the center: Allows you to return to menu tabs (top of display) when viewing screen tabs (left of display) or selecting setting items.	P.97, 150, 178

Mode/Display	Description		Refer to
	Up-down Dial	ADJ. Lever	
Scene Mode (Scene Mode selection screen)	Same as ▲▼ buttons.	Same as ◀▶ buttons.	P.88
Playback Mode (Normal playback screen)	Allows you to change the display magnification.	Same as ◀▶ buttons.	P.51, 48
Playback Mode (Grid view)	Same as ▲▼ buttons.	Same as ◀▶ buttons.	P.50
Playback Mode (Enlarged view)	Allows you to change the display magnification.	Displays the previous or next image enlarged.	P.51

Picture Display

Example of Picture Display when Shooting Pictures



Still Image Mode

Movie Mode

If you are using the camera for the first time, read this section.

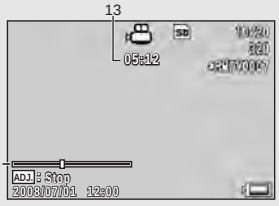
	Item Name	Refer to		Item Name	Refer to
1	Flash Mode	P.44	21	White Balance Mode/ White Balance Compensation	P.134, 138
2	Macro Shooting	P.42			
3	Self-timer	P.47			
4	Scene Mode/Multi-shot	P.88, 106	22	Exposure Metering Mode	P.105
			23	Auto Bracket	P.121, 122, 124
5	Shooting Mode Types	P.19			
6	Recording Destination	P.28			
7	Remaining Number of Still Images	P.240	24	Image Settings	P.111
			25	Exposure Compensation	P.132
8	Picture Quality	P.99	26	ISO Setting	P.140
9	Image Size	P.99	27	Conversion Lens Type	P.183
10	Focus Mode	P.102	28	Battery Symbol	P.25
11	AE Lock	P.76	29	Level Indicator	P.60, 196
12	Interval	P.128			
13	Histogram	P.63	30	Camera Shake Warning Symbol	P.37
14	Date Imprint	P.130			
15	Distortion Correction	P.117	31	Aperture Value	P.237
16	Noise Reduction	P.126	32	Shutter Speed	P.83, 86
17	Camera Shake Correction	P.131			
18	Flash Exposure Compensation/ Manual Flash Amount	P.118, 119	33	Frame Rate	P.146
			34	Remaining Recording Time	P.240
19	Digital Zoom Magnification	P.41	35	Recording Time	P.147, 240
20	Zoom Bar	P.41			

Note ----------

- The number of remaining shots available may differ from the actual number of shots, depending on the subject.
- Movie recording time and the storage capacity of still pictures may vary depending on the capacity of the recording destination (internal memory or SD memory card), shooting conditions, and the type and manufacturer of the SD memory card.
- When the number of remaining shots is 10,000 or more, "9999" is displayed.

Example of Picture Display During Playback

Still Image Mode



Movie Mode

	Item Name	Refer to		Item Name	Refer to
1	Protect	P.152	9	Image Size	P.99
2	DPOF	P.155	10	File No.	-
3	Mode Types	-	11	Battery Symbol	P.25
4	Playback Data Source	P.49	12	Date at Shooting	P.209
5	Number of Playback Files	-			
6	Total Number of Files	-	13	Recording Time or Lapsed Time	-
7	Setting at Shooting (Recording)	-	14	Indicator	-
8	Picture Quality	P.99			

Note ----------

- The [White Bal. Comp] setting displayed for number 7 is the [White Bal. Comp] value for shooting (☞P.138). The value for [White Balance Compensation] will not be displayed during playback.
- The picture display may display messages to inform you of operational instructions or the camera's status while in use.

Battery Level Indication

A battery symbol appears at the lower right of the picture display to indicate the battery level. Recharge the battery before it is depleted.

Battery Symbol	Description
Green	The battery is sufficiently charged.
	The battery level begins to drop. Recharging the battery or exchanging with new batteries is recommended.
	The battery level is low. Recharge the battery or exchange with new batteries.

Caution

- If you are using AAA nickel-metal hydride batteries or AAA Oxyride batteries, depending on the type of batteries and usage conditions, may not appear, or or may instantaneously appear. Check your batteries beforehand.
- If you are using the AC adapter, may appear. This does not indicate a malfunction and you can continue to use the camera.

Getting Ready

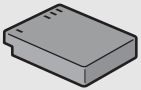
Turn the power on and get ready to shoot.

Note ----------

- If the camera is already turned on, make sure it is turned off before inserting or removing the battery.
- For information on how to turn the camera off, see P.32.

About the Battery

Rechargeable Lithium-ion Battery (sold separately)



This is a lithium-ion battery. It is economical because you can recharge it using the battery charger and use it over and over again.
The rechargeable lithium-ion battery needs to be charged before use. The battery is not charged at the time of purchase.

Note ----------

You can also use the following types of batteries.

- **AAA Alkaline Batteries (available in stores)**
  These batteries are easily obtainable. However, in a low-temperature environment, the storage capacity of shots will decrease. Warm the batteries before use. It is recommended that you use the rechargeable lithium-ion battery when using the camera for a long time.
- **AAA Oxyride Batteries (available in stores)**
  These are not rechargeable batteries, but they can be used longer in a digital camera than AAA alkaline batteries.
- **AAA Nickel-metal Hydride Batteries (available in stores)**
  These batteries are economical because you can recharge and reuse them over and over again. For charging the batteries, please use a battery charger that is compatible with the batteries.

Storage capacity of shots

- Approximate storage capacity of shots you can take

Battery Type	Storage capacity of Shots (Normal Mode)
Rechargeable Lithium-ion Battery	Approx. 350[*1]
AAA Alkaline Batteries (available in stores)	Approx. 45[*2]

[*1] Approximately 350 shots can be taken when using the LCD viewfinder (VF-1).
[*2] Approximately 50 shots can be taken when using the LCD viewfinder (VF-1).

- Based on CIPA standard (Temperature: 23 degrees Celsius, picture display on, 30 seconds between shots, 50% flash usage, turning the power off after each 10 shots).
- The storage capacity of shots when using AAA alkaline batteries is based on the use of Panasonic AAA alkaline batteries.
- The storage capacity of shots is for reference only. If the camera is used for long periods of time for setting and playback, the shooting time (the number of shots) will decrease. For long periods of use, it is recommended that you carry spare batteries.

Caution

- The nickel-metal hydride batteries available in stores are not factory-charged. Charge them before use.
- The nickel-metal hydride batteries may be inert and consequently may not supply power immediately after they are purchased or when left unused for more than a month. In such a case, recharge the batteries two or three times before use. The batteries self-discharge with time even if the camera is not used, so recharge them before use.
- The life of an AAA alkaline battery depends on the brand and the storage time from the date of production. In addition, the life of an alkaline battery becomes shorter at low temperatures.
- Other batteries, such as manganese dry cell and Ni-Cd batteries, cannot be used.
- The battery may become very hot immediately after operation. Turn the camera off and leave it to cool down sufficiently before removing the battery.
- Please remove the battery if you are not going to use the camera for a long period of time.
- When using a lithium-ion battery, use only the specified rechargeable lithium-ion battery. Do not use other rechargeable lithium-ion batteries.

SD Memory Card (available in stores)

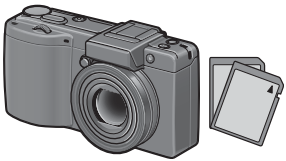
You can store still images you have taken either in the camera's internal memory or on an SD memory card (available in stores). The internal memory capacity is approx. 54 MB.
To record a lot of still images or movies at high resolutions, use a high-capacity SD memory card.

Formatting ----------

Before using a new SD memory card, be sure to format it with this camera. If an error message such as [Card Error] is displayed when an SD memory card is loaded in the camera or the card has been used with a computer or other digital camera, you must format the card with this camera prior to use. (☞P.180)

Where images are recorded ----------

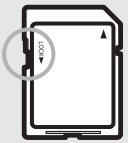
When no SD memory card is loaded, the camera records images to the internal memory; when an SD memory card is loaded, it records images to the SD memory card.

When no SD memory card is loaded	When an SD memory card is loaded
	
Records to the internal memory	Records to the SD memory card

Caution ----------

- If an SD memory card is loaded, the camera does not record to the internal memory, even if the card is full.
- Take care not to get the contacts of the card dirty.

Write-protecting your images



Move the write-protection switch on the SD memory card to LOCK to prevent your still images from being accidentally erased or the card from being formatted. If you unlock the card (by returning the switch to its original position), it is once again possible to erase images and format the card.

It is recommended to move the write-protection switch to LOCK when you have some important data recorded.

Note that you cannot shoot images on a locked card because no data can be recorded to the card. Unlock the card before shooting.

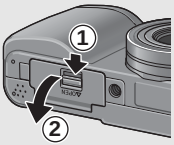
Note

- For information on switching between the SD memory card and internal memory during playback, see P.49.
- Movie recording time and the storage capacity of still pictures varies depending on the SD memory card. (☞P.240)
- You can copy images stored in the internal memory to an SD memory card. (☞P.160)
- SDHC memory card (16 GB) can also be used.

Loading the Battery and SD Memory Card

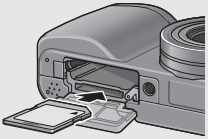
The rechargeable lithium-ion battery (sold separately) can be used to power this camera. This battery is convenient because the battery power lasts long and it can be used over and over again by recharging. If the camera is already turned on, make sure it is turned off before loading the battery and card.

1 **Slide the release lever toward "OPEN" to open the battery/ card cover.**



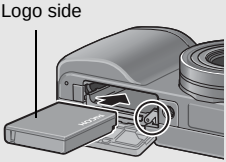
2 **Make sure the SD memory card is facing the right way and then push the card all the way in until it clicks.**

- The rechargeable lithium-ion battery may be inserted first.

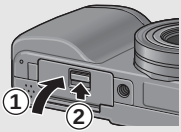


3 **Insert the rechargeable lithium-ion battery.**

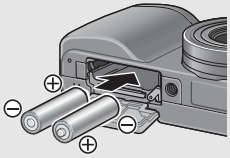
- Press the latch with the battery and insert the battery all the way into the battery compartment.
- When the rechargeable lithium-ion battery is loaded in place, it is locked with the latch.



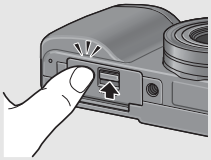
4 **Close the battery/card cover and slide the release lever in the opposite direction of "OPEN" to lock it in place.**



Loading the Specified Dry Cell Batteries (Available in Stores)
Insert the batteries in the direction shown.



Close the battery/card cover by pressing the battery cover closed while sliding the release lever with your finger.



Removing the SD Memory Card
Slide the release lever toward “OPEN” to open the battery/card cover. Push in the SD memory card and gently release to eject it. Pull the card out of the camera.

Removing the Rechargeable Lithium-ion Battery
Slide the release lever toward “OPEN” to open the battery/card cover. Press and release the latch. The battery is ejected. Pull the battery out of the camera. Be careful not to drop the battery when removing it from the camera.

Removing the Dry Cell Batteries
Slide the release lever toward “OPEN” to open the battery/card cover, and then remove the batteries. Be careful not to drop the batteries when removing them from the camera.

Caution----------

- When closing the battery/card cover, slide the release lever and be sure to lock it in place.
- Remove the batteries if you are not going to use the camera for a long period of time. Store the removed batteries in a dry cool place.

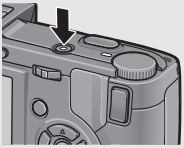
Turning the Power On/Off

Turn the camera on.

1 **Press the tabs on both sides of the lens cap, and remove the lens cap.**

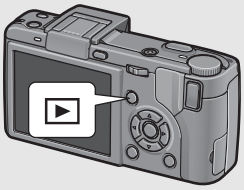
2 **Press the POWER button.**

- After the start sound, the auto focus/ flash lamp blinks for several seconds.



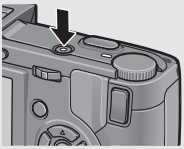
Using the Camera in Playback Mode

- Pressing the ▶ (Playback) button for more than one second turns on the camera in playback mode, allowing you to start playback at once.
- When the camera is turned on with the ▶ button, pressing the ▶ button again switches playback mode to recording mode.



Turn the camera off.

1 **Press the POWER button.**



Caution----------

- When turning the power on for the first time with a conversion lens attached, the conversion lens type selection screen appears. Select [WIDE[DW-6]] or [TELE[TC-1]], and then press the MENU/OK button. You cannot shoot without selecting a conversion lens. (☞P.183)
- After the camera is turned on, it may take longer for the camera to become ready for shooting when using the flash than when not using the flash.

Auto power off----------

- If the camera goes unused for a set period of time, it automatically turns itself off to save power. (Auto Power Off)
- The auto power off setting can be changed. (☞P.200)

Setting the Language

When the power is turned on for the first time, the display language setting screen appears. After setting the language, go on to the date/time setting (for printing the date and time on your photos).
You can shoot without these settings. However, be sure to set the language, and the date/time later. Use the setup menu for these settings.

1 Turn the power on for the first time after purchase.

- The language selection screen appears.
- To skip language setting, press the MENU/OK button.
- When the MENU/OK button is pressed, the language setting is cancelled and the video signal format-setting screen appears.

2 Press the ▲▼◀▶ buttons to select a language.

3 Press the MENU/OK button.

- The display language is set, and the date/time setting screen appears.

Note ----------

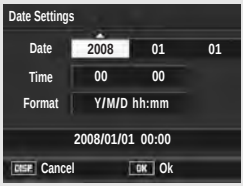
For how to set the display language and date/time on the setup menu, see "Changing the Display Language (Language/言語)" (P.210) and "Setting the Date and Time (Date Settings)" (P.209) in this guide.

Setting the Date and Time

When the power is turned on for the first time, the date/time setting screen appears.

1 Press the ▲▼◀▶ buttons to set the year, month, date and time.

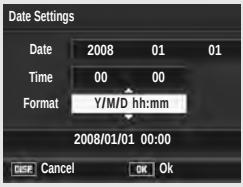
- Change the value with ▲▼ and move the frame with ◀▶.
- You can cancel the setting by pressing the DISP. Button.



Setting at shipping

2 In [Format], choose the date and time format.

- Select the date and time format with ▲▼.



3 Check the information on the screen and then press the MENU/OK button.

- The date is set.

Note ----------

- If the battery is removed for more than one week, the date and time settings will be lost. These settings must be made again.
- To retain the date and time settings, load a battery with adequate remaining power for more than two hours.
- The set date and time can be changed later. (☞P.209)
- The date and time can be inserted into images. (☞P.130)

Basic Shooting

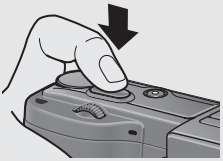
Now you are ready.

Holding the Camera

Hold the camera as shown below for best results.

1 **Hold the camera with both hands and lightly press both elbows against your body.**

2 **Put your finger on the shutter release button.**



Caution----------

When you are shooting, be careful not to obstruct the lens or flash with your fingers, hair, or the strap.

Preventing camera shake----------

If you move the camera when pressing the shutter release button, the still image might not come out clearly due to camera shake.

Camera shake tends to occur in the following cases:

- When shooting in a dark place without using the flash
- When using the zoom function (☞P.41)
- When the exposure time is increased (☞P.83)

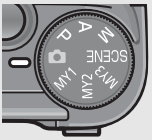
When the symbol appears on the picture display, this indicates that camera shake may occur. To prevent camera shake, try any of the following.

- Using the camera shake correction function (☞P.131)
- Setting the flash to [Auto] or [Flash On] (☞P.44)
- Raising the ISO setting (☞P.140)
- Using the self-timer (☞P.47)

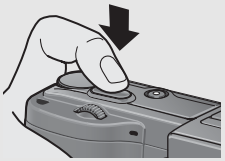
Shooting

The shutter release button works in two steps. When you press the shutter release button halfway (Half-press), the auto-focus function is triggered to determine the focal distance. Next, press it all the way down to shoot.
When your subject is not in the center of your composition, compose your photo after focusing. (Focus Lock)

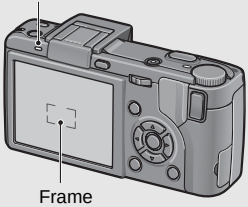
1 **Press the POWER button to turn the camera on, and turn the mode dial to 📷.**



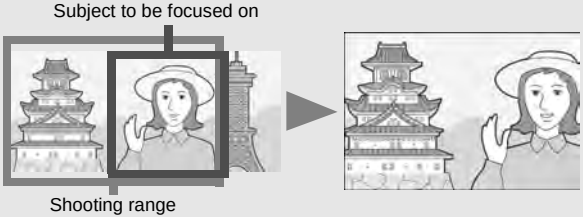
2 **Put the subject of your photo in the center of the screen and press the shutter release button halfway.**



- The camera focuses on the subject and the exposure and white balance are fixed.
- If automatic focusing fails, a red frame is displayed in the center of the picture display and the auto focus/flash lamp blinks green.
- The focal distance is measured at a maximum of nine points. Green frames appear to indicate the positions that are in focus.

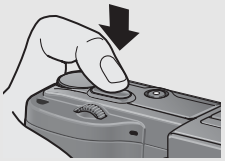


3 To take a picture with the subject in the foreground in focus against a background, half-press the shutter release button to focus on the subject, and then compose your shot.



4 Gently press the shutter release button all the way.

- The still image you have taken appears momentarily on the picture display and is recorded to the internal memory or SD memory card.



Focusing----------

- The color of the frame in the center of the picture display and the auto focus/flash lamp indicate whether the subject is in or out of focus.

Focus Status	Frame Color	Auto Focus/Flash Lamp
Before focusing	White	Off
Subject in focus	Green	Lights (green)
Subject not in focus	Red	Blinks (green)

- It may be impossible to bring the following subjects into focus, or they may not be in focus even when the frame color is green.
  - Subjects lacking contrast (the sky, a white wall, the hood of a car, etc.)
  - Flat two-dimensional objects with only horizontal lines and no significant protrusions.
  - Quickly moving objects.
  - Things in poorly lit places.
  - Areas with strong backlighting, or reflections.
  - Things that flicker, such as fluorescent lights.

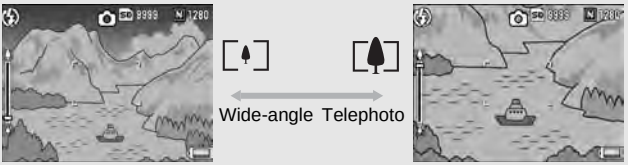
  When you want to shoot subjects like this, first focus on an object the same distance as your subject and then shoot.

Note ----------

- Press the shutter release button gently to prevent camera shake.
- The symbol indicates that camera shake may occur. Hold the camera still and focus the camera again.
- The flash fires a pre-flash to increase the AE (Auto Exposure) accuracy.
- You can set the time the still image you have taken appears on the picture display. You can also make settings to have the image remain displayed until the shutter release button is half-pressed or not to display the image after shooting. (☞P.202)

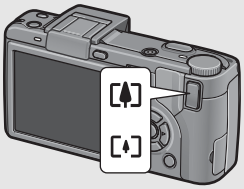
Using the Zoom Function

Pressing the [▲] (Telephoto) button allows you to take a close-up picture of the subject.
Pressing the [▼] (Wide-angle) button allows you to take a wide-angle picture.



1 With the camera ready to shoot, press the [▲] or [▼] button.

- You can check the zoom status on the zoom bar of the picture display.



2 Compose your picture and half-press the shutter release button.

3 Full-press the shutter release button.

Using the Digital Zoom ----------

Digital zooming enables you to enlarge the subject more than the maximum magnification of the optical zoom (3.0×) specified by pressing the [▲] button (up to 4.0×).

To use digital zooming, press and hold the [▲] button until the maximum magnification is reached on the zoom bar, then momentarily release the button, and then press the [▲] button again.

If [Pic Quality/Size] is set to 4000 × 3000, you can also set [Digital Zoom Img] to [Auto Resize]. (☞P.198)

This function is not available when [Pic Quality/Size] is set to RAW mode. (☞P.99)

Note ----------

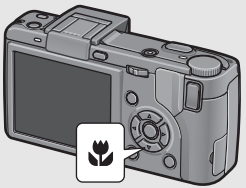
You can also set the focal length of the zoom so that it stops at five levels. (☞P.187)

Shooting Close-Ups (Macro Shooting)

Using the (Macro) button allows you to take a tight close-up of the subject. (Macro shooting)
This is good for shooting small subjects because you can shoot up to approximately 1 cm (0.4 in.) away from the front of the lens.

1 With the camera ready to shoot, press the button.

- is displayed momentarily at the center of the picture display and then is displayed at the top of the screen.



2 Compose your picture and half-press the shutter release button.

3 Full-press the shutter release button.

- To cancel macro mode, press the button again.

Note

- When using the zoom, you can shoot close-ups within the following distances:

	Distance	Shooting Range
Wide-Angle	Approx. 1 cm (from the front of the lens)	Approx. 29 mm × 22 mm
Telephoto	Approx. 4 cm (from the front of the lens)	Approx. 25 mm × 19 mm (when digital zoom is not used)
		Approx. 6.3 mm × 4.8 mm (when 4.0× digital zoom is used)

- To take a further close-up picture during macro shooting, use [Zoom Macro] in scene mode. (☞P.92)

• The macro shooting functions for scene mode are shown below.

Scene Mode	Macro Shooting
Movie	Disabled
Portrait	Disabled
SEA&SEA	Enabled
Landscape	Disabled
Nightscape	Disabled
Text Mode	Enabled
Skew Correct Mode	Enabled
Zoom Macro	Macro shooting only

Using the Flash

To use the flash, slide the ϟ (Flash) OPEN switch outward to raise the flash cover and open the flash. The flash does not fire if it is not open.
With the flash open, press the ϟ (Flash) button to change the flash mode. The default setting at the time of purchase is [Auto].
In addition, you can select the timing at which the flash fires from [1stCurtain] (right after the exposure starts) or [2ndCurtain] (right before the exposure finishes). The default setting at the time of purchase is [1stCurtain]. (☞P.120)

Flash Range for When the Flash Mode is Set to [Auto] (for when the ISO Setting is set to [Auto] or [ISO 400] ☞P.140)

Wide-Angle	Approx. 20 cm to 5.0 m (from the front of the lens)
Telephoto	Approx. 15 cm to 3.0 m (from the front of the lens)

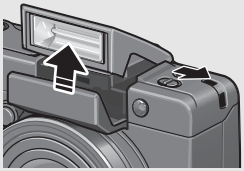
Flash Modes

	Flash Off	The flash will not fire.
AUTO	Auto	The flash fires automatically when the subject is poorly lit or backlit.
	Red-eye Flash	Reduces the red-eye phenomenon, in which people's eyes appear red in pictures.
	Flash On	The flash fires regardless of the lighting conditions.
SLOW	Flash Synchro.	The flash fires with the shutter speed slowed. This is useful when taking portrait pictures in a nightscape. Camera shake may occur, so the use of a tripod is recommended.
M	Manual Flash	The flash amount can be set using the shooting menu. The flash amount can be set at [Full] or [1/1.4], [1/2], [1/2.8], [1/4], [1/5.6], [1/8], [1/11], [1/16], [1/22], [1/32] of the maximum amount. (☞P.119) In scene mode, this function is only available when [Zoom Macro] is set.

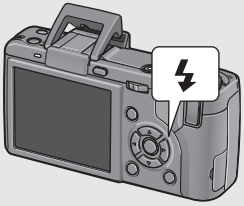
1 Select the timing at which the flash fires from [1stCurtain] or [2ndCurtain] in the shooting menu's [Synchro Settings].

- For the operating procedure, see P.120.

2 Slide the ϟ OPEN switch outward to raise the flash cover.



3 Press the ϟ button to change the flash mode.



- The flash mode symbol is displayed momentarily at the center of the picture display and then a smaller symbol is displayed at the upper left of the screen.
- If you select [Manual Flash], the flash amount will be the value set in the shooting menu. (☞P.119)
- The auto focus/flash lamp blinks while the flash charges. Once the flash is charged, the lamp turns off and the camera is ready to shoot.

Note

- When you are finished using the flash, press the center of the flash cover down with your finger.
- The flash mode setting is saved until you press the ϟ button again.
- The flash does not fire when shooting movies or in multi-shot, auto bracket, white balance bracket, or color bracket modes.
- You can adjust the light intensity of the flash. (☞P.118)
- When using AAA alkaline batteries, Oxyride batteries, or nickel-metal hydride batteries, the picture display turns off when the flash is charging.
- The flash fires a pre-flash to increase the AE (Auto Exposure) accuracy.
- You cannot use the internal flash when using an external flash. (☞P.244)

- The flash shooting functions for scene mode are shown below.

Scene Mode	Flash Shooting
Movie	Fixed to [Flash Off]
Portrait	Initial setting: Flash Off
SEA&SEA	Initial setting: Flash On
Landscape	Fixed to [Flash Off]
Nightscape	[Flash On] is disabled Initial setting: Auto
Text Mode	Initial setting: Flash Off
Skew Correct Mode	Initial setting: Flash Off
Zoom Macro	Initial setting: Flash Off

Caution----------

- You cannot use the internal flash when using the wide conversion lens (DW-6), tele conversion lens (TC-1), and hood (HA-2).
- You cannot use the internal flash when the LCD viewfinder (VF-1) is tilted. To use the internal flash with the LCD viewfinder attached, reposition the angle of the LCD viewfinder.
- The flash amount is not adjusted automatically when the flash mode is set to [Manual Flash]. Do not fire the flash near eyes (especially of infants) or at people who are driving, etc.

Using the Self-Timer

You can set the Self-timer to shoot after either two or ten seconds. A setting of two seconds is useful for preventing camera shake.

1 Turn the mode dial to .

2 Press the (Self-timer) button.

- The Self-timer symbol appears on the screen.
- The [10] to the right of the symbol indicates the number of seconds. In this case, if you press the shutter release button, the camera shoots after 10 seconds.
- Each press of the button changes the self-timer setting in the following order: 10sec, 2sec, and Self-timer Off.

3 Press the shutter release button.

- The focus is locked, and the AF auxiliary light lights when the self-timer starts.

Note

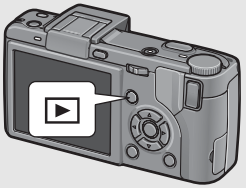
- The camera remains in self-timer mode even after the image is shot. To cancel the self-timer, press the button and change the self-timer setting to [Self-Timer Off].
- When the self-timer is set to 2 seconds, the AF auxiliary light does not light.

Playing Back Images

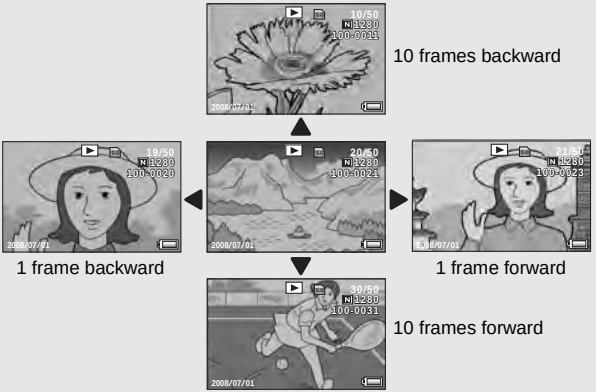
Viewing Your Images

In playback mode, you can check still images you have taken. You can also delete or zoom in on the images.

1 **Press the ▶ (Playback) button.**



- The camera switches to playback mode and the last image taken is displayed.
- You can view your pictures in order by pressing the ◀▶ buttons.
- Press the ▲ button to display the image 10 frames backward. If there are less than 10 images, the first image is displayed.
- Press the ▼ button to display the image 10 frames forward. If there are less than 10 images, the last image is displayed.
- To switch the camera from playback mode to shooting mode, press the ▶ button again.



If you are using the camera for the first time, read this section.

Caution----------

When shooting with [Pic Quality/Size] set to RAW mode (☞P.99), a JPEG file associated with the DNG file is recorded at the same time. If the JPEG file is deleted on a computer, for example, a thumbnail of the DNG file can be displayed, but the thumbnail cannot be enlarged.

Note----------

- When playing back an image (RAW12M/RAW3:2/RAW1:1) shot with [Pic Quality/Size] set to RAW mode, the JPEG file recorded at the same time as the DNG file is displayed. A symbol appears on the screen indicating RAW mode.
- When an LCD viewfinder (VF-1) is attached and [Playback Screen] is set to [VF] in the setup menu, the playback screen will be displayed in the LCD viewfinder. (☞P.201)

Checking the image in shooting mode----------

In shooting mode, immediately after you take a still image, the still image is displayed on the screen for a moment so you can check it. You can change the image display time using [LCD Confirm.] on the setup menu (☞P.202). When [LCD Confirm.] is set to [Hold], the image remains displayed until the next time you half-press the shutter release button. When [LCD Confirm.] is set to [Hold], the displayed image can also be enlarged or deleted. (☞P.51, 53)

Turning on the camera in playback mode----------

When the camera is off, pressing the ▶ button for more than one second turns the camera on. The camera starts up in playback mode.

When the camera is turned on with the ▶ button, pressing the ▶ button again switches playback mode to shooting mode.

Where images are played back from----------

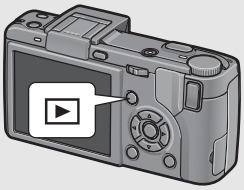
When no SD memory card is loaded, the camera plays back from the internal memory. When an SD memory card is loaded, it plays back from the SD memory card.

Grid View (Thumbnail Display)

When playing back images on the picture display, the playback screen can be divided into 20 frames (grid view). The grid view allows you to select an image to enlarge or delete.

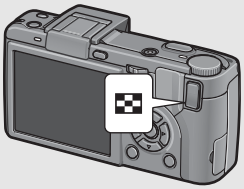
1 **Press the ▶ (Playback) button.**

- The last file recorded is displayed.



2 **Press the ⊞ (Thumbnail Display) button.**

- The screen is divided into 20 frames and thumbnails are displayed.



Switching to Single-Picture Display

1 **Press the ▲▼◀▶ buttons to select a still image.**

2 **Press the 🔍 button or the MENU/OK button.**

Enlarging Images

You can enlarge a still image displayed on the picture display.

Image Size	Enlarged View (maximum magnification)
640 × 480	3.4×
1280 × 960	6.7×
Image sizes other than those above	16×

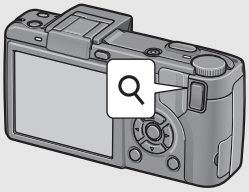
1 Press the ▶ (Playback) button.

- The last file recorded is displayed.

2 Press the ◀▶ buttons to display the still image you want to magnify.

3 Press the 🔍 (Enlarged View) button, or turn the up-down dial.

- The still image is enlarged.



In Enlarged View	
🔍 Button	Enlarges the displayed still image.
⊠ Button	Returns the enlarged still image to its original size.
Up-down Dial	Enlarges the displayed still image. Also returns the enlarged still image to its original size.
MENU/OK Button	Pressing this in enlarged view displays the still image at the maximum magnification. Pressing this again returns the still image to its original size.
▲▼◀▶ Buttons	Moves the area displayed in enlarged view.
ADJ. Lever	Displays the previous or next image enlarged. Returns to actual size when displaying movies, S-Cont or M-Cont images.

Note ----------

- When [LCD Confirm.] is set to [Hold] on the setup menu (☞P.202), the image displayed on the screen after being taken can be enlarged.
- Movies cannot be enlarged.
- For information on displaying S-Cont or M-Cont images enlarged, see P.110.

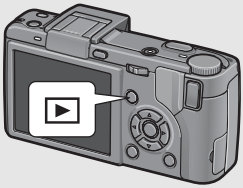
Deleting Files

You can delete unwanted or failed files from the SD memory card or internal memory.

Note ----------

When [LCD Confirm.] is set to [Hold] on the setup menu (☞P.202), the image displayed on the screen after being taken can be deleted.

Deleting a File



1 **Press the ▶ (Playback) button.**

2 **Press the ◀▶ buttons to display the file you want to delete.**

3 **Press the 🗑 (Delete) button.**

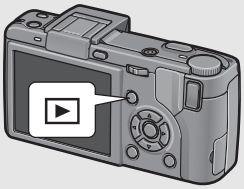
4 **Press the ▲▼ buttons to select [Delete One].**

- You can change the image for deletion with the ◀▶ buttons.

5 **Press the MENU/OK button.**

- The display indicates that the files are being deleted; once finished, it returns to the screen in Step 4.

Deleting All Files



1 **Press the ▶ (Playback) button.**

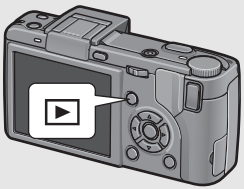
2 **Press the 🗑 (Delete) button.**

3 **Press the ▲▼ buttons to select [Delete All].**

4 **Press the MENU/OK button.**

- You are prompted to confirm that you want to delete all images. If so, press the ▶ button to select [Yes], and then press the MENU/OK button.

Deleting Multiple Files at One Time



1 **Press the ▶ (Playback) button.**

2 **Press the ⊞ (Thumbnail Display) button.**

- The screen is divided into 20 frames and thumbnails are displayed.

3 **Press the 🗑 (Delete) button.**

● **Specifying Individual Files to be Deleted**

4 **Press the ▲▼◀▶ buttons to select the file you want to delete and press the 🗑 button.**

- The trash symbol is displayed in the upper left corner of the file.

5 **Repeat Step 4 to select all the files you want to delete.**

- If you selected a file by mistake, you can deselect it by selecting the file and pressing the 🗑 button.

6 **Press the MENU/OK button.**

7 **Press the ◀▶ buttons to select [Yes] and then press the MENU/OK button.**

- The display indicates that the files are being deleted; once finished, it returns to the thumbnail display screen.

● **Specifying a Range of Files to be Deleted**

4 Press the ADJ. lever.

- Press the ADJ. lever again to return to the screen for deleting one file at a time.

5 Press the ▲▼◀▶ buttons to select the starting point of the range of files you want to delete and press the 🗑 button.

- The trash symbol is displayed in the upper left corner of the file.

6 Press the ▲▼◀▶ buttons to select the ending point of the range of files you want to delete and press the 🗑 button.

- The trash symbol is displayed in the upper left corner of the specified files.

7 Repeat Steps 5 and 6 to specify all the ranges of files you want to delete.

- If you selected a file by mistake, you can deselect it by pressing the ADJ. lever to return to the screen for deleting one file at a time, selecting the file, and pressing the 🗑 button.

8 Press the MENU/OK button.

9 Press the ◀▶ buttons to select [Yes] and then press the MENU/OK button.

- The display indicates that the files are being deleted; once finished, it returns to the thumbnail display screen.

Changing the Display with the DISP. Button

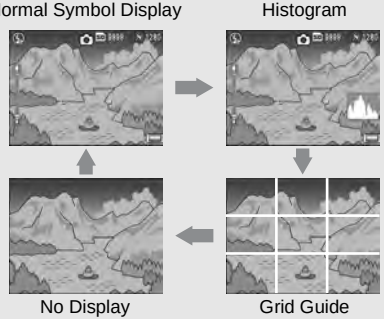
Pressing the DISP. button allows you to change the screen display mode and toggle the information displayed on the picture display.

Turning the picture display on/off ----------

Pressing the VF/LCD button while the picture display is on turns the picture display off. Some camera operations are not available when the picture display is off. Pressing the VF/LCD button again turns the picture display on.

When a LCD viewfinder (VF-1) is attached, pressing the VF/LCD button switches between the LCD viewfinder and the picture display.

- **Shooting Mode**



Press the DISP. button to change the display.

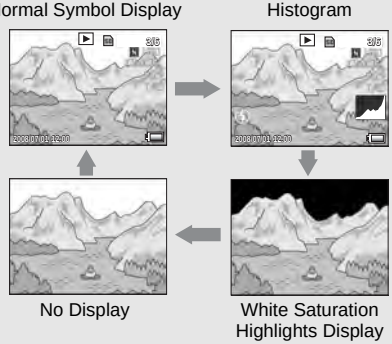
Grid Guide ----------

This displays auxiliary lines on the picture display to help you compose your picture. These lines are not recorded with images.

Note ----------

- When [Level Setting] is set to [Display] or [Disp + Snd] (☞P.196), the level indicator is displayed during normal symbol display and histogram. (☞P.60)
- If any of the following operations is performed, the picture display turns on even when it is turned off (except when an LCD viewfinder VF-1 is attached).
  - When the ADJ. lever, MENU/OK button, DISP. button, or ▶ (Playback) button is pressed.
  - When the ▲▼ buttons are pressed during manual focus. (☞P.103)
- Even when the picture display is turned off, the following conversion lens type selection screen appears when [Conversion Lens] is set to [Start Sel.]. Select [WIDE[DW-6]] or [TELE[TC-1]], and then press the MENU/OK button. You cannot shoot without selecting a conversion lens. (☞P.183)
  - When the camera is turned on with a conversion lens attached
  - When the conversion lens is attached to the camera

● During Playback Mode



Press the DISP. button to change the display.

Displaying the playback screen on the LCD viewfinder (VF-1) ----------

When an LCD viewfinder (VF-1) is attached and [Playback Screen] is set to [VF] in the setup menu, the playback screen will be displayed in the LCD viewfinder. (☞P.201)

White Saturation Highlights Display ----------

The white saturation areas of the image flash in black. White saturation is the loss of grayscale that indicates the color shading in an image in which very bright areas of the subject are rendered in white. An image with a loss of grayscale cannot be edited later. It is recommended that you shoot another image while avoiding direct sunlight and setting the exposure level lower (-). (☞P.132)

Note ----------

The white saturation highlights display is for reference only.

About the Electronic Level

When [Level Setting] is set to on in the setup menu or by pressing and holding the DISP. button (☞P.196), the camera uses a level indicator and level sound to let you know whether the image is level during shooting. The level indicator is displayed during normal symbol display and histogram.
This is useful for keeping the image level when taking pictures of scenery or buildings. This is also very useful for taking pictures with the horizon visible.
For information on how to set [Level Setting], see P.196.

● **With [Level Setting] set to [Display]:**
The level indicator appears on the picture display. When the camera is level, the level indicator becomes green, indicating that the scale is in the middle. When the camera is tilted, the mark on the level indicator becomes orange, and indicates the opposite side of the direction in which the camera is tilted.

● **With [Level Setting] set to [Disp + Snd]:**
The level indicator appears on the picture display. When the camera is level, the level indicator becomes green, indicating that the scale is in the middle, and the level sound is continually emitted at a set interval. When the camera is tilted, the mark on the level indicator becomes orange, and indicates the opposite side of the direction in which the camera is tilted.

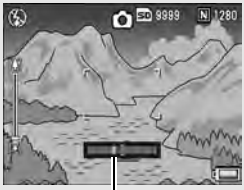
● **With [Level Setting] set to [Sound]:**
When the camera is level, a level sound is continually emitted at a set interval and the level indicator is not displayed.

Level indicator display

When level

Green

When tilted to the right



Orange

When level status cannot be determined

Red

When the camera is held vertically

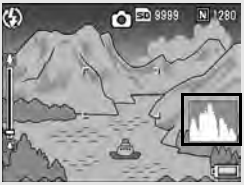
Note ----------

- If the camera is tilted too much, the mark on the level indicator becomes red and indicates the opposite end of the direction in which the camera is tilted.
- When shooting with the camera positioned vertically, the level function can be used to determine whether the image is vertically level.

Caution ----------

- If the camera is tilted too far forward or backward, or it cannot be determined whether the camera is level, the level indicator becomes red.
- During grid guide, no display, or when the picture display is turned off (except when an LCD viewfinder VF-1 is attached)(☞P.57), the level sound is emitted, but the level indicator is not displayed. When [Level Setting] is set to [Disp + Snd], only the level sound is emitted.
- The level function is not available if the camera is held upside down, when recording movies, and during interval shooting.
- The level function becomes less accurate when the camera is moving or when shooting in an environment subject to moving, such as on a amusement ride.
- No level sound is emitted when [Level Setting] is set to [Disp + Snd] or [Sound] and [Vol. Settings] is set to [□ □ □] (Mute) (☞P.193).
- Use this function as reference so see if images are level when shooting images. The accuracy of the level when using the camera as a level cannot be guaranteed.

Histogram



When Histogram is on, a histogram appears in the lower right corner on the picture display. A histogram is a graph indicating the number of pixels on the vertical axis and the brightness on the horizontal axis (from left to right, shadows (dark areas), midtones, and highlights (bright areas)).
By using the histogram, you can determine the brightness of an image without being affected by the brightness around the picture display. This also helps you correct for areas that are overly bright or dark.

If the histogram has only peaks on the right side without anything else, this picture is over-exposed with too many pixels only for highlight sections.

If the histogram has only peaks on the left side without anything else, this picture is under-exposed with too many pixels only for shadow sections. Correct the exposure to an appropriate level.

Note ----------

- The histogram displayed on the picture display is for reference only.
- After shooting, you can correct the brightness and contrast of the image by adjusting the histogram. (☞P.163)
- Depending on the shooting conditions (use of the flash, dark surrounding light, etc.), the exposure level indicated in the histogram may not correspond to the brightness of the shot image.
- Exposure compensation has its limitation. It does not necessarily achieve the best possible result.
- A histogram with peaks in the center may not necessarily provide the best result to suit your particular requirements.
  For example, an adjustment is required if you want to underexpose or overexpose the image.
- For information on how to correct the exposure compensation, see P.132.

Advanced Operations

Read this section when you want to learn more about the different camera functions.

1 Various Shooting Functions 66
2 Shooting/Playing Back Movies 145
3 Other Playback Functions 149
4 Direct Printing 171
5 Changing Camera Settings 177
6 Downloading Images to Your Computer 212
7 Appendices 227

Using the ADJ. Lever

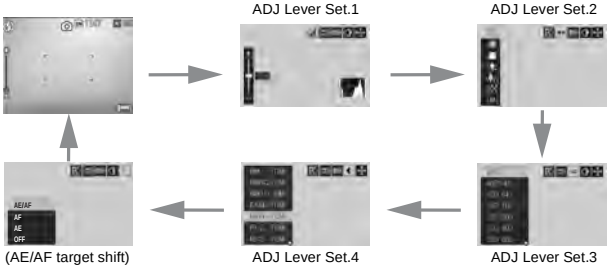
You can assign four shooting menu functions to the ADJ. lever. The fifth function (AE/AF Target Shift ☞P.69) is fixed and cannot be changed.
By using the ADJ. lever, you can display the screen for that function with fewer button operations and without displaying the shooting menu. This is useful for assigning frequently used functions.
By default, four functions are assigned (Expo. Cmp, Wht. Bal., ISO, Quality), however, you can use the setup menu to change the functions. For information on how to change the assigned functions, see P.194.

To use the ADJ. mode, follow these steps.

1 **In shooting mode, press the ADJ. lever.**

2 **Press the ADJ. lever left or right or press the ◀▶ buttons to select the desired item.**

- The screenshots below are examples of the screen display when [Expo. Cmp], [Wht. Bal.], [ISO], and [Quality] are assigned to [ADJ Lever Set.1] to [ADJ Lever Set.4].
- The fifth function (AE/AF Target Shift) is fixed and cannot be changed from the setup menu.



3 **Press the ▲▼ buttons to select the setting.**

4 **Press the ADJ. lever or the MENU/OK button to set the setting.**

Functions That Can Be Assigned to [ADJ Lever Set]

Expo. Cmp, Wht. Bal., WB Correct, ISO, Quality, Focus, Image, Expo. Met., Cont Mode, Auto BKT, Flash Comp, Flash Amt.

Note

- The functions that can be set with the ADJ. lever in scene mode differ from those in other shooting modes. The following settings can be made with the ADJ. lever. All other settings can be assigned to the ADJ. lever with [ADJ Lever Set], but they cannot be operated by pressing the ADJ. lever.

Scene Mode	Available Settings
[Movie]	White Balance
[Text Mode]	Density (☞P.68)
Other than [Movie], [Text Mode]	Expo. Cmp, Wht. Bal.

- You can also set the setting by half-pressing the shutter release button. (☞P.195)

Changing the Text Density (Scene Mode)

By pressing the ADJ. lever, you can change the shading of text for shooting with [Text Mode] (☞P.88) in scene mode.
You can select from [Deep], [Normal] and [Light].

To change the setting, use the shooting menu or the ADJ. lever. This section explains easy ways to change the setting with the ADJ. lever.
To use the shooting menu, see "Using the Menu"(☞P.97)

1 **Turn the mode dial to SCENE.**

2 **Press the MENU/OK button.**

- The scene mode selection screen appears.

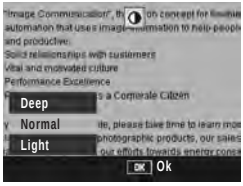
3 **Press the ▲▼◀▶ buttons to select [Text Mode] and then press the MENU/OK button.**

4 **Press the ADJ. lever.**

- The text density menu appears.

5 **Press the ▲▼ buttons to select the desired density setting.**

- You can also press the shutter release button to take a picture.



6 **Press the ADJ. lever or the MENU/OK button.**

- The text density setting does not appear on the screen.

Shifting the AE and AF Targets

By pressing the ADJ. lever, you can shift the target for the automatic exposure (AE) and/or the auto focus (AF) without having to move the camera when taking a picture. This is particularly useful when you are using a tripod to take pictures.

Available Settings	Description
AE/AF	AE and AF are set to Spot AE and Spot AF respectively and the target can be moved for both simultaneously. (The targets for Spot AE and Spot AF occupy the same position.)
AF	The AF is set to Spot AF and the target can be moved. The exposure metering is set to the mode selected in [Exposure Metering] in the shooting menu (☞P.105).
AE	The AE is set to Spot AE and the target can be moved. The focus is set to the mode selected in [Focus] in the shooting menu (☞P.102).

1 **In shooting mode, press the ADJ. lever.**

2 **Press the ADJ. lever left or right, and select ✥.**

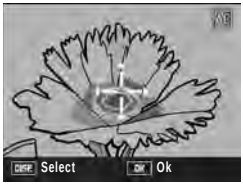
3 **Press the ▲▼ buttons to select the desired setting and then press the ADJ. lever or the MENU/OK button.**

- The target shift screen appears.

4 **Press the ▲▼◀▶ buttons or press the ADJ. lever left or right to move the cross-mark to the desired target position.**

- Pressing the DISP. button returns the display to the screen in Step 3.

5 **Press the ADJ. lever or the MENU/OK button.**



6 Half-press the shutter release button.

- If [AE/AF] is selected, the Spot AE/Spot AF position is displayed.
- If [AF] is selected, the Spot AF position is displayed.
- If [AE] is selected, the Spot AE position and focusing frame are displayed.

7 Gently press the shutter release button all the way.

Note ----------

- When [Set Fn1/2 Button] (☞P.189) is set to [MoveTarget], the screen shown in Step 4 appears when the Fn1/Fn2 button is pressed. (☞P.79)
- If you change the [AE], [AF] or [AE/AF] setting after shifting the target, the shifted target returns to the center.
- You cannot use the AE/AF target shift function if [Focus] is set to [MF]. (☞P.103)
- During scene mode, the AE/AF target shift function is not available.

Using the Fn (Function) Buttons

When functions are assigned to the Fn (Function) buttons with [Set Fn1/2 Button] on the setup menu (☞P.189), you can easily change the shooting menu setting, or switch from one function to another, simply by pressing one of the two Fn buttons. At the time of purchase, [Set Fn1 Button] is set to [AF/MF], and [Set Fn2 Button] is set to [AE Lock].
The following functions can be assigned to the Fn1/Fn2 button. For the operating procedure of each function, see the corresponding reference page.

[Set Fn1/2 Button]	Description	Refer to
AF/MF	Switching between auto focus and manual focus	P.73
AF/Snap	Switching between auto focus and snap mode	P.75
AE Lock	Locking the exposure	P.76
JPEG>RAW	Switching from JPEG to RAW mode	P.77
Color>B&W	Switching from color to black-and-white mode *1	P.78
Color>TE	Switching from color to black-and-white (TE) *2	P.78
MoveTarget	Move both the AE and AF, or one or the other targets	P.79
Expo. Cmp, Wht. Bal., WB Correct, ISO, Quality, Focus, Image, Expo. Met., Cont Mode, Auto BKT, Flash Comp, Flash Amt.	Changing the shooting menu function	P.80

*1 Image quality when [B&W] is set in [Image Settings] (☞P.113)
*2 Image quality when [B&W (TE)] is set in [Image Settings] (☞P.114)

Functions That Can Be Set in Scene Mode

The functions that can be set with the Fn1/Fn2 button in scene mode differ from those in other shooting modes. The following settings can be made with the Fn1/Fn2 button. The settings that are not marked O can be assigned to the Fn1/Fn2 button with [Set Fn1/2 Button], but they cannot be operated by pressing the Fn1/Fn2 button.

	Scene Mode							
	Movie	Portrait	SEA&SEA	Landscape	Nightscape	Text Mode	Skew Correct Mode	Zoom Macro
AF/MF	O	-	-	-	-	-	O	O
AF/Snap	O	O	O	-	O	-	O	-
AE Lock	-	O	O	O	O	O	O	O
JPEG>RAW	-	O	O	O	O	-	-	O
Color>B&W	-	-	-	-	-	-	O	O
Color>TE	-	-	-	-	-	-	O	O
Expo. Cmp	-	O	O	O	O	-	O	O
Wht. Bal.	O	O	O	O	O	-	O	O
WB Correct	O	-	-	-	-	-	-	-
ISO	-	-	-	-	-	-	O	O
Quality	O	O	O	O	O	O	O	O
Focus	O	O	O	-	O	-	O	O
Image	-	-	-	-	-	-	O	O
Expo. Met	-	-	-	-	-	-	O	O
Cont Mode	-	-	-	-	-	-	-	O
Auto BKT	-	-	-	-	-	-	-	O
MoveTarget	-	-	-	-	-	-	-	-
Flash Comp	-	O	O	-	O	-	O	O
Flash Amt.	-	-	-	-	-	-	-	O

Switching Between Auto Focus and Manual Focus (AF/MF)

Assigning the Fn1/Fn2 button to [AF/MF] (☞P.189) and then pressing the Fn1/Fn2 button during shooting allows you to switch between auto focus (AF) and manual focus (MF). Pressing the Fn1/Fn2 button switches between auto focus and manual focus depending on the [Focus] setting on the shooting menu (☞P.102), as shown below.

[Focus] setting	Press the Fn1 or Fn2 button
Multi AF	Switches between [MF] and [Multi AF]
Spot AF	Switches between [MF] and [Spot AF]
MF	Switches between [Multi AF] or [Spot AF]* and [MF]

* The last selected AF mode ([Multi AF] or [Spot AF]) is selected.

1 Set [Set Fn1/2 Button] to [AF/MF] on the setup menu.

- For the operating procedure, see P.189.

2 With the camera ready to shoot, press the Fn1/Fn2 button.

- When the focus mode changes to manual focus, the [MF] symbol appears at the upper right of the screen.
- When the focus mode changes to auto focus ([Multi AF] or [Spot AF]), the [MF] symbol disappears.

Caution----------

When [Focus] is set to [Snap] or [∞] (☞P.102), pressing the Fn1/Fn2 button does not switch AF/MF.

Note ----------

- For information on how to use manual focus, see P.103.
- You can also use the shooting menu to make the [Focus] setting. (☞P.102)
- You can press the Fn1/Fn2 button to switch AF/MF and lock the focus at the focus lock position (AF Lock). Use the following operating procedure.
  1 With the camera set to auto focus, half-press the shutter release button to focus on the subject. (Focus Lock)
  2 Release the shutter release button and press the Fn1/Fn2 button.
  3 The camera is set to MF and the shooting distance is fixed at the focus lock position.
    - To return to auto focus mode, press the Fn1/Fn2 button again.

Switching Between Auto Focus and Snap Mode (AF/Snap)

Assigning the Fn1/Fn2 button to [AF/Snap] (☞P.189) and then pressing the Fn1/Fn2 button during shooting allows you to switch between auto focus (AF) and Snap. Pressing the Fn1/Fn2 button switches between auto focus and manual focus depending on the [Focus] setting on the shooting menu (☞P.102), as shown below.

[Focus] setting	Press the Fn1 or Fn2 button
Multi AF	Switches between [Snap] and [Multi AF]
Spot AF	Switches between [Snap] and [Spot AF]
Snap	Switches between [Multi AF] or [Spot AF]* and [Snap]

* The last selected AF mode ([Multi AF] or [Spot AF]) is selected.

1 Set [Set Fn1/2 Button] to [AF/Snap] on the setup menu.

- For the operating procedure, see P.189.

2 With the camera ready to shoot, press the Fn1/Fn2 button.

- When the focus mode changes to snap mode, the [Snap] symbol appears at the upper right of the screen.
- When the focus mode changes to auto focus ([Multi AF] or [Spot AF]), the [Snap] symbol disappears.

Caution----------

When [Focus] is set to [MF] or [∞] (☞P.102), pressing the Fn1/Fn buttons does not switch AF/Snap.

Note----------

You can also use the shooting menu to make the [Focus] setting. (☞P.102)

Locking the Exposure (AE Lock)

Assigning the Fn1/Fn2 button to [AE Lock] (☞P.189) and then pressing the Fn1/Fn2 button during shooting allows you to lock or cancel the exposure.

1 **Set [Set Fn1/2 Button] to [AE Lock] on the setup menu.**

- For the operating procedure, see P.189.

2 **Check that the camera is ready to shoot.**

3 **Put the subject of your photo in the center of the screen and press the Fn1/Fn2 button.**

- The exposure is locked and the AEL symbol, aperture value, and shutter speed appear on the screen.
- Pressing the Fn1/Fn2 button again cancels the AE lock.

Note

- The exposure continues to remain locked even after you shoot a picture.
- The AE lock does not work in manual exposure mode even if the Fn1/Fn2 button is assigned to [AE Lock]. When the Fn1/Fn2 button is pressed, the value is automatically set closer to the appropriate exposure (closer to the center of the exposure value indicator). This is useful when, for example, you want to change/adjust the exposure value from closer to the center of the exposure value indicator (the appropriate exposure).

Switching from JPEG to RAW Mode (JPEG>RAW)

Assigning the Fn1/Fn2 button to [JPEG>RAW] (☞P.189) and then pressing the Fn1/Fn2 button when a [Pic Quality/Size] setting other than a RAW setting is selected (☞P.99) allows you to switch to RAW mode with the same image ratio. Pressing the Fn1/Fn2 button again returns to JPEG mode.

[Pic Quality/Size] setting	Press the Fn1 or Fn2 button
F4000(12M)/N4000(12M)/N3264(8M)/ N2592(5M)/N2048(3M)/N1280(1M)/N640(VGA)	Switches between RAW(12M) and the original [Pic Quality/Size] setting
F3:2(10M)/N3:2(10M)	Switches between RAW3:2(10M) and the original [Pic Quality/Size] setting
F1:1(9M)/N1:1(9M)	Switches between RAW1:1(9M) and the original [Pic Quality/Size] setting
RAW(12M)/RAW3:2(10M)/RAW1:1(9M)	Does not operate

1 Set [Set Fn1/2 Button] to [JPEG>RAW] on the setup menu.

- For the operating procedure, see P.189.

2 With the camera ready to shoot, press the Fn1/Fn2 button.

- The camera switches to RAW mode with the same image ratio and [RAW] is displayed in orange on the screen.
- Pressing the Fn1/Fn2 button again returns to JPEG mode.

Caution----------

Pressing the Fn1/Fn2 button does not switch to JPEG mode in the following cases.

- [Pic Quality/Size] is set to RAW mode (☞P.99)
- [Continuous Mode] is set to a setting other than [Off] (☞P.106)
- [Auto Bracket] is set to a setting other than [Off] (☞P.121)

Note----------

- Turning the camera off or changing the [Set Fn1/2 Button] setting after switching to RAW mode returns the setting to JPEG mode.
- When shooting in RAW mode, see the notes on P.100.
- You can also use the shooting menu to switch between JPEG and RAW mode. (☞P.99)

Switching from Color to Black-and-White or Black-and-White (TE) Mode (Color>B&W, Color>TE)

Assigning the Fn1/Fn2 button to [Color>B&W] or [Color>TE] (☞P.189) and then pressing the Fn1/Fn2 button with [Image Settings] set to a setting other than [B&W] or [B&W (TE)] allows you to switch from color mode to [B&W] or [B&W (TE)]. Pressing the Fn1/Fn2 button again returns to color mode.

1 **Set [Set Fn1/2 Button] to [Color>B&W] or [Color>TE] on the setup menu.**

- For the operating procedure, see P.189.

2 **With the camera ready to shoot, press the Fn1/Fn2 button.**

- The setting switches to [B&W] or [B&W (TE)] and an orange symbol is displayed on the screen.
- Pressing the Fn1/Fn2 button again returns to color mode.

Caution----------

When [Image Settings] is set to [B&W] or [B&W (TE)] (☞P.113, 114), pressing the Fn1/Fn2 button does not switch to color mode.

Note----------

- Turning off the camera after switching to [B&W] or [B&W (TE)] returns the setting to color mode.
- You can also use the shooting menu to make the color setting. (☞P.113, 114)

Shifting the AE and AF Targets

This function allows you to shift the target for the automatic exposure (AE) and/or the auto focus (AF) without having to move the camera when taking a picture. This function is the same as the ADJ. lever's AE/AF target shift function. For more information, see P.69.

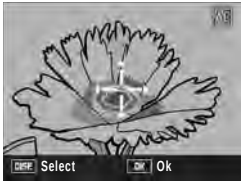
1 **Set [Set Fn1/2 Button] to [MoveTarget] on the setup menu.**

- For the operating procedure, see P.189.

2 **With the camera ready to shoot, press the Fn1/Fn2 button.**

- The target shift screen appears.

3 **Press the ▲▼◀▶ buttons or press the ADJ. lever left or right to move the cross-mark to the desired target position.**



4 **Press the DISP. button.**

5 **Press the ▲▼ buttons to select the desired setting, and then press the ADJ. lever or the MENU/OK button.**

- See P.69 for details about individual settings.
- The target shift screen appears again.
- If [Off] is selected, the display returns to the shooting screen.

6 **If the cross-mark is aligned with the desired target position, press the MENU/OK button.**

- Move the cross-mark if it is not aligned properly.

7 Half-press the shutter release button.

- If [AE/AF] is selected, the Spot AE/Spot AF position is displayed.
- If [AF] is selected, the Spot AF position is displayed.
- If [AE] is selected, the Spot AE position and focusing frame are displayed.

8 Gently press the shutter release button all the way.

Setting Other Functions

When any of the following functions are assigned to the Fn1/Fn2 button (☞P.189), you can change the settings for the functions with fewer button operations.

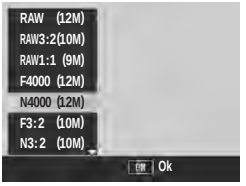
Expo. Cmp, Wht. Bal., WB Correct, ISO, Quality, Focus, Image, Expo. Met., Cont Mode, Auto BKT, Flash Comp, Flash Amt.

1 Set [Set Fn1/2 Button] to one of the above items on the setup menu.

- For the operating procedure, see P.189.

2 With the camera ready to shoot, press the Fn1/Fn2 button.

- The setting screen for that function appears.



3 Press the ▲▼ buttons to select the desired setting and then press the ADJ. lever or the MENU/OK button.

- For [WB Correct], press the ▲▼◀▶ buttons or press the ADJ. lever left or right to move the point to the desired position on the white balance compensation map, and then press the MENU/OK button.

Note

The settings for these functions can also be changed in the shooting settings menu. (☞P.94)

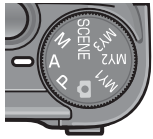
Shooting with a Set Aperture Value (A: Aperture Priority Mode)

Setting the mode dial to A (aperture priority mode) allows you to manually set the aperture value. Once the aperture value is set, the camera automatically sets the optimal shutter speed.
Selecting a lower aperture value (opening the aperture) allows you to blur the background and capture a sharp portrait of the foreground subject. Selecting a higher aperture value (closing the aperture) allows you to capture an image with everything from the foreground to the background in focus.
The aperture values that can be selected differ according to the zoom position.
Aperture values for wide angle shooting: 2.5 to 9.1
Aperture values for telephoto shooting: 4.4 to 15.8

Note

- Depending on the set aperture value, the image may be overexposed and the [!AE] symbol will appear when shooting in particularly bright places. In this case, select a higher aperture value (closing the aperture), or set [Auto Aper. Shift] to [On] (☞P.143). When [Auto Aper. Shift] is set to [On], in aperture priority mode, the camera will automatically raise the aperture value so the correct exposure can be obtained.
- The aperture opens or closes once the shutter release button is pressed.
- Although the range of fluctuation for the set aperture value is kept to a minimum, there may be some fluctuation in the aperture value depending on the zoom position.
- Depending on the aperture value, some shutter speeds may not be available.

1 **Turn the mode dial to A.**



- The mode symbol appears on the picture display, and the current aperture value is displayed in orange on the right edge of the screen.

2 **Rotate the up-down dial to change the aperture value.**

3 **Half-press the shutter release button.**

- The shutter speed is set and displayed on the screen.

4 **Gently press the shutter release button all the way.**

Shooting with a Set Aperture Value and Shutter Speed (M: Manual Exposure Mode)

Setting the mode dial to M (manual exposure mode) allows you to manually set the aperture value and shutter speed.
You can select from the following shutter speeds.

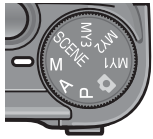
1/2000	1/1600	1/1250	1/1000	1/800	1/640
1/500	1/400	1/320	1/250	1/200	1/160
1/125	1/100	1/80	1/60	1/50	1/40
1/30	1/25	1/20	1/15	1/13	1/10
1/8	1/6	1/5	1/4	1/3	1/2.5
1/2	1/1.6	1/1.3	1	2	4
8	15	30	60	120	180

Note

- Depending on the aperture value, some shutter speeds may not be available.
- Although the range of fluctuation for the set aperture value is kept to a minimum, there may be some fluctuation in the aperture value depending on the zoom position.

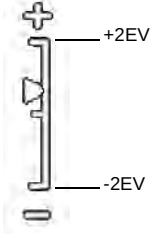
Faster shutter speeds allow you to capture a sharp image of a fast-moving subject. Slower shutter speeds allow you to capture an image with a flowing effect and emphasize the movement of the subject.
Use the up-down dial to set the aperture value.
Use the ADJ. lever to set the shutter speed.

1 **Turn the mode dial to M.**



- The mode symbol appears on the picture display, and the current aperture value, shutter speed, and exposure value indicator are displayed on the right edge of the screen.

- When the exposure value is in the range of -2EV to +2EV, the brightness of the picture display changes according to the exposure value.
- When the exposure value exceeds the range of -2EV to +2EV, the indicator lights orange and the brightness of the picture display does not change.



2 **Rotate the up-down dial to change the aperture value.**

3 **Press the ADJ. lever left or right to change the shutter speed.**

4 **Half-press the shutter release button.**

5 **Gently press the shutter release button all the way.**

Note

- To increase the exposure time, lower the shutter speed. In this case, camera shake may occur. Hold the camera steady with two hands or use a tripod when shooting.
- While shooting with a slow shutter speed, the picture display turns off.
- When the ISO setting is set to [Auto] or [Auto-Hi] in manual exposure mode, the ISO is fixed at ISO 100. (☞P.140)
- The AE lock does not work in manual exposure mode even if the Fn1/Fn2 button is assigned to [AE Lock]. When the Fn1/Fn2 button is pressed, the value is automatically set closer to the appropriate exposure (closer to the center of the exposure value indicator). This is useful when, for example, you want to change/adjust the exposure value from closer to the center of the exposure value indicator (the appropriate exposure).

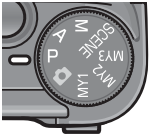
Caution

- When the shutter speed is set to 15 seconds or more, the function to remove noise for long exposure shots is activated. Therefore, the time until image recording is complete is about twice the set shutter speed. This function is activated regardless of the setting for [Noise Reduction].
- When the shutter speed is set to 1 or more seconds, the camera shake correction function cannot be used. When the shutter speed is set to 1 or more seconds while the camera shake correction function is turned on, changes to .

Shooting with an Combined Aperture Value and Shutter Speed (P: Program Shift Mode)

Setting the mode dial to P (program shift mode) allows you to shoot with a set combination of the aperture value and shutter speed. Use the up-down dial to set the program shift mode.

1 **Turn the mode dial to P.**



- The mode symbol appears on the picture display.

2 **Half-press the shutter release button.**

- The current combination of the aperture value and shutter speed appear on the screen.

3 **Release your finger from the shutter release button.**

4 **Rotate the up-down dial to select the combination of the aperture value and shutter speed.**

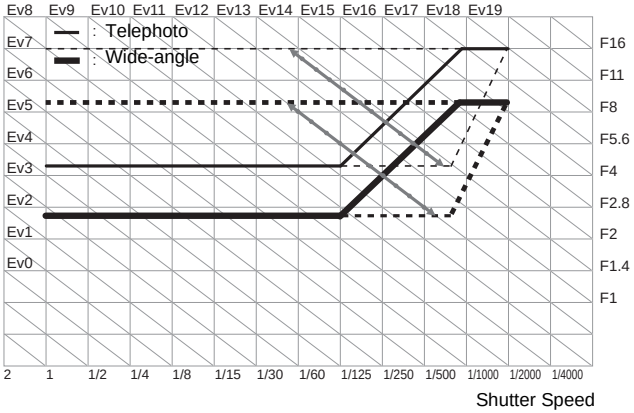
- The combination of the aperture value and shutter speed are displayed for 10 seconds. Rotate the up-down dial during that time to change the combination of the aperture value and shutter speed.

5 **Press the shutter release button to shoot the picture.**

Note

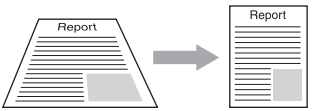
The following is the program diagram.

- In this example, the flash mode is set to [Flash Off], and the ISO setting is set to [ISO 100].
- The aperture value and shutter speed can be shifted within the area indicated in gray. This changes depending on the exposure value (Ev).



Shooting with Optimal Settings According to Shooting Conditions (SCENE: Scene mode)

Setting the mode dial to SCENE allows you to select from among the following modes and shoot with settings automatically optimized for shooting conditions.

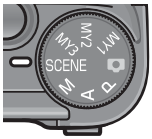
Scene Modes	Description
Movie	Allows you to shoot movies with sound. For detailed operations, see P.145.
Portrait	Use when taking portrait pictures.
SEA&SEA	Use when taking pictures under water.
Landscape	Use when taking scenery pictures with abundant greenery or blue sky.
Nightscape	Use when shooting night scenes. You can also shoot with night scenes with people in the frame. In Nightscape Mode, the flash fires when all of the following conditions are satisfied. • The flash is set to [Auto]. • The flash is determined to be necessary because it is dark. • There is a figure or another object nearby.
Zoom Macro	Automatically optimizes the zoom position, shoot the subject larger than with normal macro shooting. Optical zoom cannot be used. For detailed operations, see P.92.
Skew Correct Mode	Use to straighten a rectangular object, such as a message board or business card, shot at an angle to make it look as if it were shot squarely. For detailed operations, see P.91.  In skew correction mode, select [N1280] or [N640] for [Pic Quality/Size]. (☞P.99)

Scene Modes	Description
Text Mode	Use when capturing text images, for example notes written on a whiteboard at a meeting. Images are captured in black and white. You can also change the shading of text. (☞P.68) You can set the image size to either 4000 × 3000 or 2048 × 1536 pixels. (☞P.99)

Note

For information on the shooting menu items in scene mode, see P.96.

1 **Turn the mode dial to SCENE.**



- The camera is ready to shoot and the selected scene mode is displayed at the top of the picture display.

2 **Press the MENU/OK button to change the scene mode.**

- The scene mode selection screen appears.

3 **Press the ▲▼◀▶ buttons to select the desired scene mode.**

4 **Press the MENU/OK button.**

- The scene mode type is displayed at the top of the picture display.

5 **Press the shutter release button to shoot the picture.**

When you want to change shooting menu in scene mode, or setup menu settings----------

Press the MENU/OK button in shooting mode, and then press the ▲ button once or twice to select the [MODE] tab. Then, press the ▶ button once for the shooting menu, and twice for the setup menu to display. For information on how to set each setting, see P.97, 178.

● **Returning to Normal Shooting Mode**

1 **Turn the mode dial to 📷.**

Using the Skew Correction Mode

1 **Turn the mode dial to SCENE.**

- The camera is ready to shoot and the selected scene mode is displayed at the top of the picture display.

2 **Press the MENU/OK button.**

- The scene mode selection screen appears.

3 **Press the ▲▼◀▶ buttons to select [Skew Correct Mode].**

4 **Press the MENU/OK button.**

5 **Press the shutter release button to shoot the picture.**

- The display indicates that the image is being processed, and then the area recognized as the correction range is displayed with an orange frame. Up to five areas can be recognized.
- If the target area cannot be detected, an error message appears. The original image remains unchanged.
- To select another correction area, move the orange frame to the target area by pressing the ▶ button.
- To cancel skew correction, press the ▲ button. Even if you cancel skew correction, the original image remains unchanged.

6 **Press the MENU/OK button.**

- The display indicates that the image is being corrected, and then the corrected image is recorded. The original image remains unchanged.

Caution----------

When [Skew Correct Mode] is selected, note the following:

- To shoot the subject as large as possible, position it so that the entire portion of the subject is visible on the picture display.
- The camera may fail to recognize the subject in the following cases:
  - When the image is out of focus
  - When four edges of the subject are not clearly visible
  - When it is hard to distinguish between the subject and background
  - When the background is complicated
- Two images, one before correction and the other after correction, are recorded. If the number of remaining shots is less than two, you cannot shoot the subject.

Note----------

- You can also correct the skew of a previously shot still image. (☞P.161)
- For images shot in RAW mode (☞P.99), the skew is corrected in the JPEG file recorded at the same time as the raw data. No skew is corrected in the DNG file.

Shooting in Zoom Macro Mode

1 **Turn the mode dial to SCENE.**

- The camera is ready to shoot and the selected scene mode is displayed at the top of the picture display.

2 **Press the MENU/OK button.**

- The scene mode selection screen appears.

3 **Press the ▲▼◀▶ buttons to select [Zoom Macro].**

4 **Press the MENU/OK button.**

5 **Press the [T] (Telephoto) button or [W] (Wide-angle) button.**

- The magnification appears on the picture display.

6 **Compose your picture and half-press the shutter release button.**

7 **Full-press the shutter release button.**

Note ----------

- You can shoot close-ups using the zoom macro within the following distances.

Approx. 1 cm (from the front of the lens)	Shooting range: Approx. 17 mm × 13 mm (when digital zoom is not used)
	Shooting range: Approx. 4.2 mm × 3.2 mm (when 4.0× digital zoom is used)

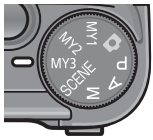
- If [Pic Quality/Size] is set to 4000 × 3000, you can also set [Digital Zoom Img] to [Auto Resize] and auto resize zoom is activated. (☞P.198)

Shooting with Custom Settings (MY1/MY2/MY3: My Settings Mode)

Setting the mode dial to MY1/MY2/MY3 allows you to shoot with preset settings. Use [Reg. My Settings] on the setup menu to make the MY1/MY2/MY3 settings. (☞P.185)

1 **Turn the mode dial to MY1/ MY2/MY3.**

- Turn the mode dial to MY1 to make the settings for [MY1] in [Reg. My Settings].
  Turn the mode dial to MY2 for [MY2], and turn to MY3 for [MY3].



2 **Press the shutter release button to shoot the picture.**

Symbol of shooting mode setting registered to [Reg. My Settings]

Note

- You can change the camera settings set in my settings mode. Turning the mode dial or turning the camera off returns to the original MY1/MY2/MY3 settings.
- You can switch shooting modes in my settings mode without turning the mode dial. (☞P.144)

Shooting Menu

Press the MENU/OK button in shooting mode to display the shooting menu. The shooting menu can be used to set the following shooting settings.

When Mode Dial is Set to Any Mode Other Than SCENE

Setting	Options [Default Settings]	Refer to
Pic Quality/Size	RAW(12M), RAW3:2(10M), RAW1:1(9M), F4000(12M), [N4000(12M)], F3:2(10M), N3:2(10M), F1:1(9M), N1:1(9M), N3264(8M), N2592(5M), N2048(3M), N1280(1M), N640(VGA)	P.99
Focus	[Multi AF], Spot AF, MF, Snap, ∞	P.102
Exposure Metering	[Multi], Center, Spot	P.105
Continuous Mode	[Off], Continuous, S-Cont, M-Cont	P.106
Image Settings	Auto Levels, Hard, [Normal], Soft, B&W, B&W (TE), Setting1, Setting2	P.111
Distortion Corr.	On, [Off]	P.117
Flash Expo. Comp.	-2.0 to +2.0	P.118
Man. Flash Amount	Full, 1/1.4, [1/2], 1/2.8, 1/4, 1/5.6, 1/8, 1/11, 1/16, 1/22, 1/32	P.119
Synchro Settings	[1stCurtain], 2ndCurtain	P.120
Auto Bracket	[Off], ON ±0.3, ON ±0.5, WB-BKT, CL-BKT	P.121
Noise Reduction	[Off], ISO 401>, ISO 801>, ISO 1600, On	P.126
Interval	[0 Sec.], 5 seconds to 3 hours	P.128
Date Imprint	[Off], Date, Time	P.130
Camera Shake Cor	[On], Off	P.131
Exposure Comp.(*1)	-2.0 to +2.0	P.132
White Balance	[Auto], (Outdoors), (Cloudy), (Incandescent Lamp), (Fluorescent Lamp), M (Manual Settings), CT (Detail)	P.134
White Bal. Comp.	———	P.138
ISO Setting	[Auto], Auto-Hi, ISO 64, ISO 100, ISO 200, ISO 400, ISO 800, ISO 1600	P.140
Restore Defaults(*2)	———	P.142
Auto Aper. Shift (*3)	On, [Off]	P.143
Switch Shooting Mode (*4)	Auto Shooting Mode, Program Shift Mode, Aperture Priority Mode, Manual Exposure Mode	P.144

(*1) This setting cannot be displayed when the mode dial is set to M.
(*2) This setting can be displayed only when the mode dial is set to .
(*3) This setting can be displayed only when the mode dial is set to A.
(*4) This setting can be displayed only when the mode dial is set to MY1/MY2/MY3. However, when [Reg. My Settings] (☞P.185) is set to scene mode, [Switch Shooting Modes] will not be displayed even when MY1/MY2/MY3 is selected.

When Mode Dial is Set to SCENE

When the mode dial is set to SCENE, the displayed items differ depending on the selected scene mode. See the following table.

Setting	Movie	Portrait	SEA&SEA	Landscape	Nightscape	Text Mode	Skew Correct Mode	Zoom Macro	Refer to
Pic Quality/Size	-	O	O	O	O	-	O	O	P.99
Density	-	-	-	-	-	O	-	-	P.68
Size	-	-	-	-	-	O	-	-	-
Movie Size	O	-	-	-	-	-	-	-	P.99
Frame Rate	O	-	-	-	-	-	-	-	P.146
Focus	O	O	O	-	O	-	O	O	P.102
Exposure Metering	-	-	-	-	-	-	O	O	P.105
Continuous Mode	-	-	-	-	-	-	-	O	P.106
Image Settings	-	-	-	-	-	-	O	O	P.111
Distortion Corr.	-	O	O	O	O	-	O	O	P.117
Flash Expo. Comp.	-	O	O	O	-	-	O	O	P.118
Man. Flash Amount	-	-	-	-	-	-	-	-	P.119
Synchro Settings	-	O	O	-	O	-	O	O	P.120
Auto Bracket	-	-	-	-	-	-	-	O	P.121
Noise Reduction	-	-	-	-	-	-	-	O	P.126
Interval	-	-	-	-	-	-	-	-	P.128
Date Imprint	O	O	O	O	O	O	O	O	P.130
Camera Shake Cor	-	O	O	O	O	O	O	O	P.131
Exposure Comp.	-	O	O	O	O	-	O	O	P.132
White Balance	O	O	O	O	O	-	O	O	P.134
White Balance Compensation	O	-	-	-	-	-	-	-	P.138
ISO Setting	-	-	-	-	-	-	O	O	P.140
Restore Defaults	-	-	-	-	-	-	-	-	P.142

O Available - Not available

Note

The setup menu can be accessed from the shooting menu. (☞P.177)

Using the Menu

In the instructions of this manual, the menu selection is confirmed when you "Press the MENU/OK button" (as in Step 5 below), but you can also confirm the setting and return to the menu screen by pressing the ◀ button.

1 Press the MENU/OK button in shooting mode.

- The shooting menu is displayed.
- In scene mode, press the ▲ button once or twice to select the [MODE] tab, and then press the ▶ button. The shooting settings menu appears.

The menu items are provided on four screens.

2 Press the ▲▼ buttons to select the desired item.

- If the ADJ. lever or the DISP. button is pressed at this point, the display returns to the screen shown in Step 1.
- Press the ▼ button at the bottom item to display the next screen.

3 Press the ▶ button.

- The menu item settings are displayed.

4 Press the ▲▼ buttons to select the setting.

5 Press the MENU/OK button.

- The setting is confirmed, the shooting menu disappears and the camera is ready to shoot.
- Pressing the ◀ button in Step 5 confirms the setting and the display returns to the screen shown in Step 2.

Changing the display

Press the ◀ button to select a tab on the left of the screen. (If the ADJ. lever or the DISP. button is pressed at this point, the display returns to the screen shown in Step 1.)

- Press the ▲▼ buttons to change screens.
- Press the ▶ button to return to menu item selection.

Choosing Picture Quality Mode/ Image Size (Pic Quality/Size)

The file size of a shot still image depends on the picture quality mode and image size settings. For movies, choose the movie size. Figures inside the bold frame indicate those shown on the screen.

Still Images

Image Size	Picture Quality Mode	Pic Quality/ Size	Remarks
4000 × 3000	RAW	RAW(12M)	• For downloading to a computer for advanced image editing.
3984 × 2656		RAW3:2(10M)	
2992 × 2992		RAW1:1(9M)	
4000 × 3000	F (Fine) N (Normal)	F4000(12M) N4000(12M)	• For creating large prints. • For downloading to a computer for trimming and other processes.
3984 × 2656	F (Fine) N (Normal)	F3:2(10M) N3:2(10M)	
2992 × 2992	F (Fine) N (Normal)	F1:1(9M) N1:1(9M)	
3264 × 2448	N (Normal)	N3264(8M)	
2592 × 1944	N (Normal)	N2592(5M)	• For creating prints.
2048 × 1536	N (Normal)	N2048(3M)	
1280 × 960	N (Normal)	N1280(1M)	• For shooting a large number of pictures.
640 × 480	N (Normal)	N640(VGA)	• For shooting a large number of pictures. • For attaching to e-mail. • For posting on a website.

- When scene mode is set to [Skew Correct Mode], you can select 1280 × 960 or 640 × 480.
- When scene mode is set to [Text Mode], you can select 4000 × 3000 or 2048 × 1536.
- When the image size is set to [RAW3:2], [F3:2] or [N3:2], a black border is added to the top and bottom of the image on the picture display in accordance with the shooting range.
- When the image size is set to [RAW1:1], [F1:1] or [N1:1], a black border is added to the left and right sides of the image on the picture display in accordance with the shooting range.

Movies

Image Size	Movie Size
640 × 480	640
320 × 240	320

- You can also choose the number of frames for movies. (☞P.146)

Note ----------

- The number of images that can be stored in the internal memory or SD memory card depends on the [Pic Quality/Size] setting. (☞P.240)
- There are three picture quality modes: Normal mode (N), Fine mode (F), and RAW mode.

Normal mode:	The compression ratio is high, resulting in a small file. Normally, shooting is done in this mode.
Fine mode:	The compression ratio is low, resulting in a large file, but the picture quality is better than in Normal.
RAW mode:	The raw image data is saved as a RAW format file (.DNG file). A JPEG file is also recorded at the same time. This allows you to use image editing software to edit the image while retaining the high quality at the time the image was shot.

Shooting with RAW mode ----------

Normally, a shot image is processed and compressed by the camera and then saved as a small JPEG file.
When shooting in RAW mode, shot images are not processed by the camera. The raw data loaded from the camera's sensor is stored in the DNG file created when shooting in RAW mode. A DNG file is a raw image format designed by Adobe Systems. You can use image editing software compatible with the DNG file format to edit the near-original image data on a computer. You can use the provided Irodio Photo & Video Studio to perform simple editing of DNG files on Windows. However, you cannot use the Irodio Photo & Video Studio to edit DNG files on a Macintosh. Use a commercially-available software that can edit DNG files.

When shooting in RAW mode, note the following:

- RAW mode cannot be used with certain shooting functions. Please see the restrictions listed for individual functions.
- No date is added to the DNG file even if [Date Imprint] is set. The date is added to the JPEG file recorded at the same time as the DNG file.
- [Image Settings] settings on the shooting menu apply only to the JPEG file recorded at the same time.
- You can use [RAW/JPEG Setting] on the setup menu to change the picture quality and image size of the JPEG recorded at the same time. (☞P.206)

1 **Displaying the shooting menu.**

- For the operating procedure, see P.97.

2 **Press the ▼ button to select [Pic Quality/Size] and press the ▶ button.**

3 **Press the ▲▼ buttons to select the desired setting.**

Still Images

Movies

4 **Press the MENU/OK button.**

- The setting appears on the screen.

Changing the Focusing Mode (Focus)

When you shoot the subject in the default focusing mode, the camera focuses automatically with Auto Focus (AF).
Select from the following five focusing modes.

Focusing Modes

Symbol	Method	Description
None	Multi AF	Measures the distances from 9 AF areas and focuses to the nearest AF area. This prevents the center of the picture display from becoming out of focus and enables you to shoot with a minimum number of out-of-focus pictures.
None	Spot AF	Selects one AF area at the center of the picture to allow the camera to focus on this area automatically.
MF	MF (Manual Focus)	Enables you to adjust the focus manually.
S	Snap	Fixes the shooting distance to a short distance (approx. 2.5 m (8.2 ft.)).
∞	∞ (Infinity)	Fixes the shooting distance to infinity. Infinity is useful for shooting distant scenes.

1 **Displaying the shooting menu.**

- For the operating procedure, see P.97.

2 **Press the ▼ button to select [Focus] and press the ▶ button.**

3 **Press the ▲▼ buttons to select the desired setting.**

4 **Press the MENU/OK button.**

- If you selected [MF], [Snap], or [∞], the symbol appears on the screen.

Note

- Assigning the Fn1/Fn2 button to [AF/MF] (☞P.189) allows you to switch between auto focus and manual focus by pressing the Fn button (☞P.71).
- Assigning the Fn1/Fn2 button to [AF/Snap] (☞P.189) allows you to switch between auto focus and snap by pressing the Fn button (☞P.71).

Manual Focus Shooting (MF)

If the camera fails to focus automatically, you can focus manually (MF: Manual Focus).
Manual focus enables shooting at a fixed distance.

Note ----------

- In scene mode, manual focus can be used when [Zoom Macro] or [Skew Correct Mode] is selected.
- You can also use manual focus to focus on objects within the macro shooting range.
- Assigning the Fn1/Fn2 button to [AF/MF] (☞P.189) allows you to switch between auto focus and manual focus by pressing the Fn1/Fn2 button (☞P.71).

1 **Displaying the shooting menu.**

- For the operating procedure, see P.97.

2 **Press the ▼ button to select [Focus] and press the ▶ button.**

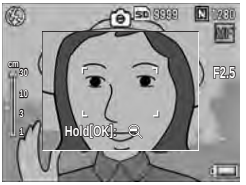
3 **Press the ▲▼ buttons to select [MF].**

4 **Press the MENU/OK button.**

- [MF] and the focus bar appear on the screen.
- The distance indicated on the focus bar is for reference only.

5 Press and hold the MENU/OK button as required.

- Pressing and holding the MENU/OK button enlarges only the center of the screen.
- Pressing and holding the MENU/OK button again returns to normal display.



6 Press the ▲▼ buttons to adjust the focus.

- Pressing the ▲ button adjusts the focus to farther objects. Pressing the ▼ button adjusts the focus to closer objects.

7 Press the shutter release button to shoot the picture.

Changing the Exposure Metering Modes (Exposure Metering)

You can change the exposure metering modes (the range to use for metering) used to determine the exposure value.
There are three exposure metering modes.

Exposure Metering Modes

Symbol	Mode	Description
None	Multi	The entire shooting range is divided into 256 partitions, and each is metered to determine the overall exposure value.
	Center	The entire image is metered, with emphasis on the center, to determine the exposure value. Use this when the brightness of the center and surroundings are different.
	Spot	Only the center of the image is metered to determine the exposure value. Use this setting when you want to use the brightness at the center. This is useful if there is a marked difference in contrast or backlighting.

1 **Displaying the shooting menu.**

- For the operating procedure, see P.97.

2 **Press the ▼ button to select [Exposure Metering] and press the ▶ button.**

3 **Press the ▲▼ buttons to select the desired setting.**

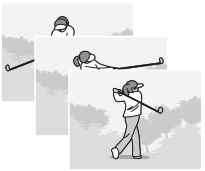
4 **Press the MENU/OK button.**

- If you select the setting [Center] or [Spot], the symbol appears on the screen.

Shooting with Multi-Shot (Continuous/S-Cont/M-Cont)

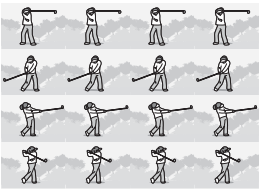
With multi-shot, you can shoot consecutive images.
Multi-shot has the following three modes:

Continuous



Pictures continue to be taken for as long as you hold down the shutter release button.
Still images are recorded one at a time, just as in normal shooting.

S (Stream)-Cont

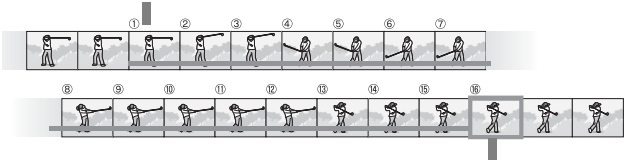


With just one full-press of the shutter release button, you can take 16 consecutive shots at intervals of 1/7.5 seconds in about 2 seconds.
The 16 still images are grouped together as a set and are recorded as one image file (4000 × 3000 pixels).

M (Memory-reversal)-Cont

The camera memorizes the scene while you hold down the shutter release button, and once you release it, the previous 2 seconds of shots are recorded.
The 16 still images are grouped together as a set and are recorded as one image file (4000 × 3000 pixels).

(2) The camera records the previous (approx.) 2 seconds



(1) If you release the shutter release button here...

1 **Displaying the shooting menu.**

- For the operating procedure, see P.97.

2 **Press the ▼ button to select [Continuous Mode] and press the ▶ button.**

3 **Press the ▲▼ buttons to select [Continuous], [S-Cont], or [M-cont].**

4 **Press the MENU/OK button.**

- The symbol appears on the screen.

Continuous

5 **Compose your picture and then press and hold the shutter release button.**

- Pictures continue to be taken for as long as you hold down the shutter release button.

6 **Release your finger from the shutter release button to stop taking pictures.**

- To playback consecutive images shot in multi-shot mode, switch the camera to playback mode (☞P.48) and select the still image you want to play back with the ◀▶ buttons.

S-Cont (S Multi-Shot)

5 **Compose your picture and then press the shutter release button.**

- 16 pictures are taken automatically.

M-Cont (M Multi-Shot)

5 Compose your picture and then press and hold the shutter release button.

- The camera memorizes the scene while you hold down the shutter release button.

6 Release your finger from the shutter release button.

- The camera stops shooting and the 16 still images (in the previous 2 seconds) are recorded as one still image.

Caution----------

- When [Pic Quality/Size] is set to RAW mode, S-Cont and M-Cont are not available. You can take up to five consecutive shots with Continuous.
- When shooting with S-Cont or M-Cont, the digital zoom is activated even when [Digital Zoom Img] is set to [Auto Resize] on the setup menu.
- In scene mode, multi-shot is only available when [Zoom Macro] is set.
- The time until image recording is complete may be longer when using the internal memory.
- The maximum number of images that can be shot in the multi-shot mode is 999.

Note----------

- To return to normal single-image shooting, follow Steps 1 to 3, select [Off] in Step 3, and press the MENU/OK button.
- In M-Cont mode, if you release the shutter release button within 2 seconds from the time you first pressed it, the shots from the time you pressed the shutter until you released it are recorded and the number of consecutive shots will be less than 16.
- The flash is turned off.
- The camera shake correction function cannot be used during multi-shot shooting. If multi-shot shooting is set while the camera shake correction function is turned on, changes to . (☞P.131)
- During multi-shot, the focus and exposure value are locked.
- When [Sequential No.] is set to [On] (☞P.207) and the last four digits of the file number exceed [9999] during multi-shot, a separate folder is created in the SD memory card and successive pictures taken in multi-shot are stored in this folder.
- When shooting with S-Cont or M-Cont, the ISO setting is fixed at [Auto] even if it is set to [ISO 64], [ISO 100] or [ISO 200].
- The storage capacity of images in the multi-shot mode depends on the image size setting.

- The storage capacity of images in the multi-shot mode with the internal memory are as shown in the table below.

[Pic Quality/Size]	[RAW/JPEG Setting]	Storage capacity of multi-shot mode
RAW(12M)	Fine	2
	Normal	2
	N640	3
RAW3:2(10M)	Fine	2
	Normal	3
	N640	3
RAW1:1(9M)	Fine	3
	Normal	3
	N640	4
F4000(12M), N4000(12M), F3:2(10M), N3:2(10M), F1:1(9M), N1:1(9M), N3264(8M), N2592(5M), N2048(3M)	-	8
N1280(1M), N640(VGA)	-	20

Viewing an S-Cont or M-Cont Still Image in Enlarged Display Mode

While a still image (16 frames in an image file) taken with S-Cont or M-Cont is displayed, you can enlarge any one of the 16 frames. You can also switch between frames while viewing the image in enlarged display mode.

To view a frame from an S-Cont or M-Cont still image in enlarged display mode, follow the steps below.

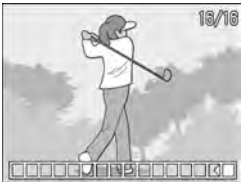
1 **Press the ▶ (Playback) button.**

- The last shot taken is displayed.

2 **Press the ▲▼◀▶ buttons to display an S-Cont or M-Cont still image.**

3 **Press the 🔍 (Enlarged View) button.**

- The first frame of the consecutive images is displayed in enlarged display mode. The frame position bar appears at the bottom of the screen.
- Press the ◀▶ buttons to switch frames. To return to the 16-frame display, press the MENU/OK button.



Note

- Press the DISP. button to switch between displaying the bar at the bottom of the screen, displaying the grid guide, and hiding the display. (☞P.57)
- If the ADJ. lever is pressed to the left or right to move to the previous or next images when a normal still image is displayed in enlarged view, the images will return to actual size when S-Cont or M-Cont images are displayed.

Setting the Picture Quality and Color (Image Settings)

You can change the picture quality of an image, including the contrast, sharpness, color and color depth.
You can select from the following picture quality settings.

Picture Quality Modes

Type	Description
Auto Levels	The camera automatically corrects image tone when images are recorded in order to reduce areas that are overly bright or dark and achieve appropriate brightness even for high contrast images.
Hard	The Contrast, Sharpness, and Color Depth are increased to create a stronger, sharper image.
Normal	Normal picture quality
Soft	The Contrast, Sharpness, and Color Depth are decreased to create a softer image.
B&W	Creates a black and white picture. You can select from five [Contrast] and [Sharpness] levels. (☞P.113)
B&W (TE)*	You can set the toning effect for black-and-white images. You can select from five [Toning Effect], [Color Depth], [Contrast], and [Sharpness] levels. You can select from [Sepia], [Red], [Green], [Blue], and [Purple] for the [Toning Effect]. (☞P.114)
Setting1 Setting2	You can select from five [Contrast], [Sharpness], and [Color Depth] levels. (☞P.116)

* Toning Effect

1 **Displaying the shooting menu.**

- For the operating procedure, see P.97.

2 **Press the ▼ button to select [Image Settings] and press the ▶ button.**

3 **Press the ▲▼ buttons to select the desired picture quality.**

- For [B&W], [B&W (TE)], [Setting1], or [Setting2], set the values. (☞P.113, 114, 116)
  If the values are already set, you can set the picture quality by selecting [B&W], [B&W (TE)], [Setting1], or [Setting2].

4 Press the MENU/OK button.

- If you selected a setting other than [Normal], the symbol appears on the screen.

Note

When [Auto Levels] is selected, the exposure correction may not be effective and the color tones may be partially different from those of other settings for [Image Settings].

Setting the Black-and-White Picture Quality (B&W)

1 **Displaying the shooting menu.**
- For the operating procedure, see P.97.

2 **Press the ▼ button to select [Image Settings] and press the ▶ button.**

3 **Press the ▲▼ buttons to select [B&W] and press the ▶ button.**
- The [Image Settings] screen appears.

4 **Press the ▲▼ buttons to select [Contrast] and [Sharpness], and press the ◀▶ buttons to adjust the settings.**

5 **Press the MENU/OK button.**
- The [B&W] setting is saved, and the display returns to the shooting menu.

6 **Press the MENU/OK button.**
- The symbol appears on the screen.

Note

Assigning the Fn1/Fn2 button to [Color>B&W] (☞P.189) allows you to switch between color and black-and-white mode by pressing the Fn1/Fn2 button. (☞P.71)

Setting the Toning Effect for Black-and White Images (B&W (TE))

1 **Displaying the shooting menu.**
- For the operating procedure, see P.97.

2 **Press the ▼ button to select [Image Settings] and press the ▶ button.**

3 **Press the ▲▼ buttons to select [B&W (TE)] and press the ▶ button.**
- The [Image Settings] screen appears.

4 **Press the ▲▼ buttons to select [Toning Effect] and press the ▶ button.**

5 **Press the ▲▼ buttons to select from [Sepia], [Red], [Green], [Blue], or [Purple], and press the MENU/OK button or the ◀ button.**

6 **Press the ▲▼ buttons to select [Contrast] and [Sharpness], and press the ◀▶ buttons to adjust the settings.**

7 **Press the MENU/OK button.**
- The [B&W (TE)] setting is saved, and the display returns to the shooting menu.

8 **Press the MENU/OK button.**

- The symbol appears on the screen.

Note ----------

Assigning the Fn1/Fn2 button to [Color>TE] (☞P.189) allows you to switch between color and black-and-white (TE) mode by pressing the Fn1/Fn2 button. (☞P.71)

Customizing the Picture Quality (Setting1, Setting2)

1 **Displaying the shooting menu.**
- For the operating procedure, see P.97.

2 **Press the ▼ button to select [Image Settings] and press the ▶ button.**

3 **Press the ▲▼ buttons to select [Setting1] or [Setting2].**

4 **Press the ▶ button.**
- The [Image Settings] screen appears.

5 **Press the ▲▼ buttons to select [Contrast], [Sharpness], and [Color Depth], and press the ◀▶ buttons to adjust the settings.**

6 **Press the MENU/OK button.**
- The settings for [Setting1] or [Setting2] are saved, and the display returns to the shooting menu.

7 **Press the MENU/OK button.**
- The symbol appears on the screen.

Correcting Distorted Images While Shooting (Distortion Corr.)

You can automatically correct image distortion while shooting by setting [Distortion Corr.] to [On].

1 **Displaying the shooting menu.**

- For the operating procedure, see P.97.

2 **Press the ▼ button to select [Distortion Corr.] and press the ▶ button.**

3 **Press the ▲▼ buttons to select [On].**

4 **Press the MENU/OK button.**

- The symbol appears on the screen.

Caution----------

- When [Pic Quality/Size] is set to RAW mode, you cannot use distortion correction for DNG or JPEG files.
- You cannot use distortion correction when shooting S-Cont, M-Cont, or movies.
- When [Distortion Corr.] is set to [On], the angle of view will change.
- When distortion correction is not necessary due to the position of the zoom or other factors, there will be no correction even when [Distortion Corr.] is set to [On]. However, the distortion correction symbol will still appear when the image is played back even if distortion correction was not carried out.
- The corrected image will not be displayed on the picture display even when [Distortion Corr.] is set to [On].

Adjusting the Light Intensity of the Flash (Flash Expo. Comp.)

You can adjust the light intensity of internal flash. You can set the light intensity from -2.0 EV to +2.0 EV in increments of 1/3 EV.

1 **Displaying the shooting menu.**

- For the operating procedure, see P.97.

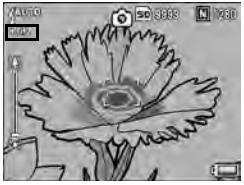
2 **Press the ▼ button to select [Flash Expo. Comp.] and press the ▶ button.**

- The flash exposure compensation bar appears.

3 **Press the ▲▼ buttons to make the setting.**

4 **Press the MENU/OK button.**

- The setting appears on the screen except when the flash mode is set to [Flash Off] and [Manual Flash].



Note

- When the flash mode is set to [Manual Flash], the [Man. Flash Amount] setting (☞P.119) will be enabled, the [Flash Expo. Comp.] setting will no longer be enabled.
- For information on how to use the flash, see P.44.

Caution

Flash exposure compensation may not work outside the flash range (☞P.44).

Setting the Flash Amount in Manual Flash Mode (Man. Flash Amount)

You can set the internal flash amount when the flash mode is set to [Manual Flash] (☞P.44). The flash amount can be set at [Full] or [1/1.4], [1/2], [1/2.8], [1/4], [1/5.6], [1/8], [1/11], [1/16], [1/22], [1/32] of the maximum amount.

1 **Displaying the shooting menu.**

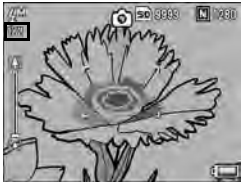
- For the operating procedure, see P.97.

2 **Press the ▼ button to select [Man. Flash Amount] and press the ▶ button.**

3 **Press the ▲▼ buttons to select the desired setting.**

4 **Press the MENU/OK button.**

- The setting appears on the screen when the flash mode is set to [Manual Flash].



Note ----------

- The value set in [Man. Flash Amount] is available only when the flash mode is set to [Manual Flash]. (☞P.44)
- When the flash mode is set to [Manual Flash], the [Man. Flash Amount] setting will be enabled, the [Flash Expo.Comp.] setting will no longer be enabled.
- The [Man. Flash Amount] setting and the actual flash amount may differ slightly in some cases.

Caution ----------

The flash amount is not adjusted automatically when the flash mode is set to [Manual Flash]. Do not fire the flash near eyes (especially of infants) or at people who are driving, etc.

Setting the Flash Timing (Synchro Settings)

You can select the timing for which the flash fires from the two settings shown below. The default setting at the time of purchase is [1stCurtain].

Setting	Description
1stCurtain	The flash fires right after the exposure starts. Select this setting for normal shooting.
2ndCurtain	The flash fires right before the exposure finishes. Since the shot is first exposed to the regular amount of light and then the flash fires right before the exposure ends, this setting can be used to achieve more natural expressions of light trails and motion blurs in situations such as when shooting moving subjects at slow shutter speeds.

1 **Displaying the shooting menu.**

- For the operating procedure, see P.97.

2 **Press the ▼ button to select [Synchro Settings] and press the ▶ button.**

3 **Press the ▲▼ buttons to select the desired setting.**

4 **Press the MENU/OK button.**

Note ----------

For information on how to use the flash, see P.44.

Shooting Consecutively with Different Exposures (Auto Bracket)

The auto bracketing function automatically shoots three consecutive shots at three exposure levels based on the set exposure level. Select from -0.3EV, ±0, +0.3EV or -0.5EV, ±0, +0.5EV for the difference in exposure level.

1 **Displaying the shooting menu.**

- For the operating procedure, see P.97.

2 **Press the ▼ button to select [Auto Bracket] and press the ▶ button.**

3 **Press the ▲▼ buttons to select [ON ±0.3] or [ON ±0.5].**

4 **Press the MENU/OK button.**

- The symbol appears on the screen.

5 **Press the shutter release button to shoot the picture.**

- The screenshot to the right shows the images shot with the [ON ±0.3] setting.
  Three consecutive shots are taken at ±0, -0.3EV, and +0.3EV based on the set exposure compensation setting. They are, from left to right, at -0.3EV (darker), standard exposure compensation setting, and +0.3EV (brighter).

Note

- The exposure compensation can be changed using the shooting menu. (☞P.132)
- This function is not available during multi-shot shooting.
- The flash cannot be used.
- With auto bracket, you can shoot using different white balance or color settings as well as different exposures. However, you can only select one setting.

Shooting Consecutively with Different White Balance (WB-BKT)

The white balance bracket function automatically records three images - a reddish image, a bluish image, and an image of the current white balance.
This is useful if you cannot determine the appropriate white balance.

1 **Displaying the shooting menu.**

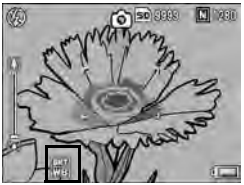
- For the operating procedure, see P.97.

2 **Press the ▼ button to select [Auto Bracket] and press the ▶ button.**

3 **Press the ▲▼ buttons to select [WB-BKT].**

4 **Press the MENU/OK button.**

- The symbol appears on the screen.



5 **Press the shutter release button to shoot the picture.**

- Three images (a reddish image, an image equal to the current white balance, and a bluish image) are automatically recorded.

Note

- This function is not available when [Pic Quality/Size] is set to RAW mode.
- This function is not available during multi-shot shooting.
- The flash cannot be used.
- If [Image Settings] is set to [B&W], the white balance bracket function can be set but it does not operate.
- The white balance can be changed using the shooting menu. (☞P.134)

Shooting Consecutively with Different Color (CL-BKT: Color Bracket)

When [CL-BKT] is selected and a still image is shot, the camera records three images – a black-and-white image, a color image, and a black-and-white (TE) image, or the camera records two images – a black-and-white image and a color image. Before taking a picture, use [CL-BKT B&W (TE)] on the setup menu to set whether the camera records three images – a black-and-white image, a color image, and a black-and-white (TE) image, or two images – a black-and-white image and a color image. (☞P.205)

1 **Displaying the shooting menu.**

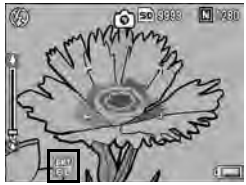
- For the operating procedure, see P.97.

2 **Press the ▼ button to select [Auto Bracket] and press the ▶ button.**

3 **Press the ▲▼ buttons to select [CL-BKT].**

4 **Press the MENU/OK button.**

- The symbol appears on the screen.



5 Press the shutter release button to shoot the picture.

- When [CL-BKT B&W (TE)] is set to [On] (☞P.205), a black-and-white image, a color image, and a black-and-white (TE) image are recorded.

- When [CL-BKT B&W (TE)] is set to [Off] (☞P.205), a black-and-white image and a color image are recorded.

* When [Image Settings] is set to [B&W (TE)] on the shooting menu, a black-and-white image, a color image, and a black-and-white (TE) image are recorded even if [CL-BKT B&W (TE)] is set to [Off].

Note

- This function is not available when [Pic Quality/Size] is set to RAW mode.
- This function is not available during multi-shot shooting.
- The flash cannot be used.

Contrast, Sharpness and Color Depth during Color Bracket Shooting

During color bracket shooting, the contrast, sharpness, and color depth values set in [Image Settings] apply as follows:

- Black-and-white images shot using color bracket shooting:
  The values set for [B&W] in [Image Settings] apply.
- Black-and-white (TE) images shot using color bracket shooting:
  The values set for [B&W(TE)] in [Image Settings] apply.
- Color images shot using color bracketing shooting:
  The values for the items selected in [Image Settings] apply. However, the values for [Normal] in [Image Settings] apply when [Image Settings] is set to [B&W] or [B&W(TE)].

Reducing Image Noise (Noise Reduction)

This function allows you to set noise reduction to be carried out with priority when shooting still images.

Available Settings	Description
Off	Image noise reduction is not carried out with priority.
ISO 401>	When shooting still images, noise reduction is carried out with priority when the ISO sensitivity is 401 or higher.
ISO 801>	When shooting still images, noise reduction is carried out with priority when the ISO sensitivity is 801 or higher.
ISO 1600	When shooting still images, noise reduction is carried out with priority when the ISO sensitivity is 1600.
On	When shooting still images, noise reduction is carried out with priority regardless of the ISO sensitivity.

1 **Displaying the shooting menu.**

- For the operating procedure, see P.97.

2 **Press the ▼ button to select [Noise Reduction] and press the ▶ button.**

3 **Press the ▲▼ buttons to select the desired setting.**

4 **Press the MENU/OK button.**

- The symbol appears on the screen.

Note

- When noise reduction is set, noise reduction takes priority over other image processing functions. As a result, image definition may be diminished in some cases depending on the subject.
- In scene mode, noise reduction is only available when [Zoom Macro] is set.
- Noise reduction is not available for DNG files if [Pic Quality/Size] is set to RAW mode. Noise reduction is only applied to the JPEG file recorded with the DNG file.
- When noise reduction is not carried out due to the setting for ISO sensitivity even though noise reduction is not set to [Off], the noise reduction symbol will not be displayed on the screen. In addition, the noise reduction symbol will not be displayed when playing back images for which noise reduction was not carried out.

Shooting Pictures Automatically at Set Intervals (Interval)

You can set the camera to automatically take pictures at fixed intervals.
You can set the shooting interval from 5 seconds to 3 hours in increments of 5 seconds.

1 **Displaying the shooting menu.**
- For the operating procedure, see P.97.

2 **Press the ▼ button to select [Interval] and press the ▶ button.**

3 **Press the ▲▼ buttons to set the hours.**

4 **Press the ▶ button to move to the minutes setting, then use the ▲▼ buttons to set the minutes.**
- You can press and hold the ▲▼ buttons to quickly raise or lower the minute setting.

5 **Press the ▶ button to move to the seconds setting, then use the ▲▼ buttons to set the seconds.**

6 **Press the MENU/OK button.**
- [Interval] appears on the screen.

7 **Press the shutter release button to shoot the picture.**
- A picture is taken every time the fixed interval elapses.

8 **To stop shooting, press the MENU/OK button.**

Caution----------

- The interval shooting setting is cleared when the camera is turned off.
- The time until the next picture can be taken according to the shooting menu setting may be longer than the time set for interval shooting. In this case, the shooting interval becomes longer than the set time.
- Interval is not available during scene mode.

Note ----------

- Depending on the remaining battery level, the battery may become depleted during movie shooting. Use of a battery with adequate remaining power or the AC adapter (sold separately) is recommended.
- If you press the shutter release button during interval shooting, the camera shoots as usual. However, the interval shooting setting is unaffected. After shooting, once the time specified in interval shooting elapses, the next shot is taken.
- When interval shooting is turned on, multi-shot is automatically set to [Off] even if it had been set to [Continuous] or [M-Cont].
- An SD memory card with sufficient available memory or a high speed memory card is recommended.

Inserting the Date into a Still Image (Date Imprint)

You can insert the date (YY/MM/DD) or the date and time (YY/MM/DD hh:mm) at the lower right of a still image.

1 **Displaying the shooting menu.**

- For the operating procedure, see P.97.

2 **Press the ▼ button to select [Date Imprint] and press the ▶ button.**

3 **Press the ▲▼ buttons to select [Date] or [Time].**

4 **Press the MENU/OK button.**

- The symbol appears on the screen.

Note

- If the date and time have not been set, [Date Imprint] cannot be used. First make the date and time settings. (☞P.209)
- [Date Imprint] cannot be used with movies.
- When shooting in RAW mode, the date cannot be imprinted on the DNG file. The date is added to the JPEG file recorded at the same time as the DNG file.
- The date imprinted in an image cannot be deleted.

Using the Camera Shake Correction Function to Prevent Camera Shake (Camera Shake Cor)

You can prevent camera shake by turning on the camera shake correction function.
At the time of purchase, the camera shake correction function is turned on.

1 **Displaying the shooting menu.**
- For the operating procedure, see P.97.

2 **Press the ▼ button to select [Camera Shake Cor] and press the ▶ button.**

3 **Press the ▲▼ buttons to select [On].**

4 **Press the MENU/OK button.**
- The symbol appears on the screen.

Caution----------
- In multi-shot mode or manual exposure mode, when the shutter speed is set to 1 or more seconds, the camera shake correction function cannot be used. When the camera shake correction function is turned on in multi-shot mode or the shutter speed is set to 1 or more seconds in manual exposure mode, changes to .
- The camera shake correction function does not work in movie mode. If you select [Movie] in scene mode, the display disappears.
- The camera shake correction function cannot prevent movement of the shooting subject (caused by wind, etc.).
- Effects of the camera shake correction function vary depending on the surroundings.

Note----------
The symbol appears when camera shake is likely to occur. (☞P.37)

Changing the Exposure (Exposure Comp.)

The exposure setting enables you to select the brightness level for your picture. Normally, if your subject is centered, backlight compensation is automatically activated, and you can shoot with the correct exposure.
In the following cases, or when you intentionally want to change the exposure, you can adjust the exposure setting. Exposure can be specified in the range from -2.0 EV to +2.0 EV. Setting the level higher (+) makes the picture brighter and lower (-) makes the picture darker.

For backlighting
When the background is particularly bright, the subject will appear dark (underexposed). In this case, set the exposure level higher (+).

When your subject is whitish
The entire picture will turn out dark (underexposed). Set the exposure level higher (+).

When your subject is darkish
The entire picture will turn out bright (overexposed). Set the exposure level lower (-).
The same happens when you take a photo of a subject in a spotlight.

To change the setting, use the shooting menu or the ADJ. lever. This section explains easy ways to change the shading setting with the ADJ. lever. (☞P.66)
To use the shooting menu, see "Using the Menu". (☞P.97).

1 **In shooting mode, press the ADJ. lever.**

2 **Press the ADJ. lever left or right, or press the ◀▶ buttons until the exposure compensation bar appears.**

3 **Press the ▲▼ buttons to set the exposure setting.**
- You can also press the shutter release button to take a picture.

4 **Press the ADJ. lever or the MENU/OK button.**

- The setting appears on the screen.

Caution----------

- This function is not available in manual exposure mode.
- When shooting in particularly bright places, you may not be able to correct the exposure level. In that case, the [!AE] symbol appears on the screen.

Using Natural and Artificial Lighting (White Balance)

Adjust the white balance so that a white subject will appear white. At purchase, the white balance mode is set to [Auto]. Normally you do not need to change the setting, but if the camera is having difficulty determining the white balance when shooting an object of a single color or when shooting under multiple light sources, you can change the setting.

White Balance Modes

Symbol	Mode	Description
AUTO	Auto	Adjusts the white balance automatically.
	Outdoors	Select this when shooting outdoors (sunny) and white balance fails to adjust properly.
	Cloudy	Select this when shooting in cloudy weather or shade and the white balance fails to adjust properly.
	Incandescent Lamp	Select this when shooting under incandescent light and white balance fails to adjust properly.
	Fluorescent Lamp	Select this when shooting under fluorescent light and white balance fails to adjust properly.
	Manual Settings	Adjust the white balance manually. ☞P.136
	Detail	Select from among 16 levels including values close to incandescent lamp, sunny, and cloudy conditions. ☞P.137

To change the setting, use the shooting menu or the ADJ. lever. This section explains easy ways to change the setting with the ADJ. lever. (☞P.66)
To use the shooting menu, see “Using the Menu”. (☞P.97).

1 **In shooting mode, press the ADJ. lever.**

2 **Press the ADJ. lever left or right, or press the ◀▶ buttons until the white balance menu appears.**

3 **Press the ▲▼ buttons to select a setting other than [M] or [CT].**

- You can also press the shutter release button to take a picture.

4 Press the ADJ. lever or the MENU/OK button.

- The symbol appears on the screen.

Caution----------

The white balance function is not available when [Image Settings] is set to [B&W] or [B&W (TE)], or scene mode is set to [Text Mode].

Note----------

- The color tone set in [White Balance] can be corrected (☞P.138). Color tone can also be corrected after shooting (☞P.167).
- The white balance may not be adjusted correctly for a subject that is mostly dark. In this case, add something white to the subject.
- When shooting with the flash, the white balance may not be adjusted correctly if [Auto] is not selected. In this case, switch to [Auto] to shoot with the flash.

Setting the White Balance Manually (Manual Settings)

1 **In shooting mode, press the ADJ. lever.**

2 **Press the ADJ. lever left or right, or press the ◀▶ buttons until the white balance menu appears.**

3 **Press the ▲▼ buttons to select [M].**

4 **Point the camera at a piece of paper or something white under the lighting conditions for your picture.**

5 **Press the DISP. button.**

- The white balance is set.

6 **Press the MENU/OK button.**

- The symbol appears on the screen.
- The screen is displayed with the white balance set in Step 5. If the result is not as expected, repeat the steps to change the settings as many times as required.

Note

To cancel [Manual Settings], select a setting other than [M] in Step 3.

Setting the White Balance Details (Detail)

1 **In shooting mode, press the ADJ. lever.**

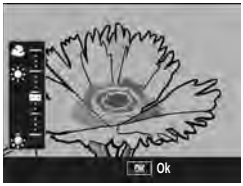
2 **Press the ADJ. lever left or right, or press the ◀▶ buttons until the white balance menu appears.**

3 **Press the ▲▼ buttons to select [CT] and press the DISP. button.**

- The white balance details screen appears.

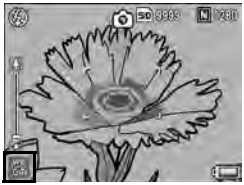
4 **Press the ▲▼ buttons to set the desired setting.**

5 **Press the MENU/OK button.**



6 **Press the MENU/OK button.**

- The symbol appears on the screen.



Note ----------

To cancel [Detail], select a setting other than [CT] in Step 3.

Correcting the White Balance Mode Color Tone (White Bal. Comp.)

The white balance mode color tone set in [White Balance] (☞P.134) can be corrected to green, magenta, blue or amber. After this, even if the white balance mode is changed, the same value will be applied to the changed white balance mode.

1 **Displaying the shooting menu.**

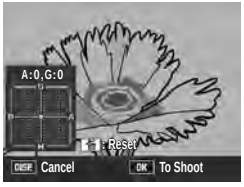
- For the operating procedure, see P.97.

2 **Press the ▼ button to select [White Bal. Comp.] and press the ▶ button.**

- The [White Bal. Comp.] screen appears, and the white balance compensation map displays at the lower left.

3 **Press the ▲▼◀▶ buttons or the ADJ. lever left or right to move the point around the white balance compensation map and adjust the color tones.**

- Press the ▲▼◀▶ buttons to move the point around the white balance compensation map. [G] denotes green, [A] denotes amber, [M] denotes magenta and [B] denotes blue, and the color tones change toward the respective colors depending on the location of the point.
- The correction position will display on top of the white balance map.
- To cancel white balance compensation, press the DISP. button.
- Press the 🗑 button to reset the color tone while correcting.
- Even if you press the shutter button during this screen, you can shoot with the white balance that is being corrected.



4 Press the MENU/OK button.

- The symbol appears on the screen.

Caution

- When using the ADJ. lever to adjust the white balance, select [WB Correct] from the setting menu and press the MENU/OK button. The white balance compensation map will appear on the screen. Select [Reset] from the setting menu and press the MENU/OK button in order to reset the compensation value.

- The white balance compensation is not available when [Image Settings] is set to [B&W] or [B&W (TE)].
- In scene mode, this function is only available when [Movie] is selected.
- Depending on the subject, there may be no correction effect in some cases.
- The correction value may differ with [White Balance Compensation] in the playback menu. (☞P.167)

Note

The color tone of a shot still image can be corrected later. (☞P.167)

Changing the Sensitivity (ISO Setting)

ISO sensitivity indicates how sensitive film is to light. A greater value means higher sensitivity. High sensitivity is suitable for shooting an object in a dark place or a fast-moving object while minimizing blurring.

You can select from the following ISO settings:

Auto, Auto-Hi, ISO 64, ISO 100, ISO 200, ISO 400, ISO 800, ISO 1600

When ISO setting is set to [Auto], the camera automatically changes the sensitivity according to the distance, brightness, macro settings, and quality/size. Usually, use the camera in the [Auto] mode.

When the ISO setting is set to [Auto-Hi] (auto high sensitivity), the sensitivity is automatically set according to the shooting conditions, but the upper limit of the sensitivity can be set higher than in [Auto]. When shooting a dark subject, the shutter speed set in [Auto-Hi] is faster than in [Auto], which may reduce camera shake or blurring of the subject. Set the maximum sensitivity for [Auto-Hi] in the setup menu. (☞P.188)

If you do not want to allow the camera to change the ISO sensitivity, select an ISO setting other than [Auto] or [Auto-Hi].

To change the setting, use the shooting menu or the ADJ. lever. This section explains easy ways to change the setting with the ADJ. lever. (☞P.66)
To use the shooting menu, see "Using the Menu". (☞P.97).

1 **In shooting mode, press the ADJ. lever.**

2 **Press the ADJ. lever left or right, or press the ◀▶ buttons until the ISO setting menu appears.**

3 **Press the ▲▼ buttons to select the desired setting.**

4 **Press the ADJ. lever or the MENU/OK button.**

- The setting appears on the screen.

Note

- Images shot with a higher sensitivity may appear grainy.
- The camera can reduce image noise depending on the ISO sensitivity. (☞P.126)
- The ISO sensitivity ranges for when the ISO setting is set to [Auto] are shown in the table below.

When the flash is not used

Pixels	Default sensitivity	Minimum sensitivity	Maximum sensitivity
640	64	64	283
1280	64	64	238
2048	64	64	176
2592	64	64	154
3264	64	64	154
4000	64	64	154

When the flash is used

Zoom	Default sensitivity	Minimum sensitivity	Maximum sensitivity
Wide-angle	100	100	400
Telephoto	238	100	400

- When the ISO sensitivity is set to [Auto] or [Auto-Hi], the ISO sensitivity that displays when half-pressing the shutter release button may differ from the actual ISO sensitivity in some cases (when using the flash, etc.).

Returning the Shooting Menu Settings to their Defaults (Restore Defaults)

To return the shooting menu settings to their defaults, follow the steps below.

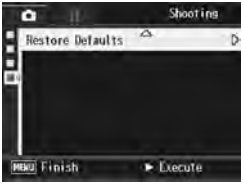
1 **Turn the mode dial to 📷.**

2 **Press the MENU/OK button.**

- The shooting menu is displayed.

3 **Press the ▲▼ buttons to select [Restore Defaults] and press the ▶ button.**

- A confirmation message appears.



4 **Press the ▶ button to select [Yes] and then press the MENU/OK button.**

- The display indicates the camera is restoring the initial settings. Once it is finished, the display returns to the shooting mode screen.

Note ----------

For a list of functions whose settings are saved when the camera is turned off, see P.245.

Automatically Changing the Aperture Value in Aperture Priority Mode (Auto Aper. Shift)

Depending on the set aperture value, the image may be overexposed and the [!AE] symbol will appear when shooting in particularly bright places. In this case, select a higher aperture value (closing the aperture), or set [Auto Aper. Shift] to [On]. When [Auto Aper. Shift] is set to [On], in aperture priority mode, the camera will automatically raise the aperture value so the correct exposure can be obtained. (☞P.81)

1. **Turn the mode dial to A.**
2. **Displaying the shooting menu.**
   - For the operating procedure, see P.97.
3. **Press the ▼ button to select [Auto Aper. Shift] and press the ▶ button.**
4. **Press the ▲▼ buttons to select [On].**
5. **Press the MENU/OK button.**

Note

[Auto Aper. Shift] will only display when the mode dial is set to A.

Changing the Shooting Mode When in My Settings Mode (Switch Shooting Mode)

You can switch shooting modes in my settings mode (☞P.93) without turning the mode dial.

1 **Turn the mode dial to MY1/ MY2/MY3.**

- The symbol for the shooting mode registered to [Reg. My Settings] appears on the screen.

2 **Displaying the shooting menu.**

- For the operating procedure, see P.97.

3 **Press the ▼ button to select [Switch Shooting Mode] and press the ▶ button.**

4 **Press the ▲▼ buttons to select the desired setting.**

5 **Press the MENU/OK button.**

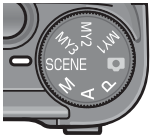
- The shooting mode is switched and the symbol appears on the screen.

Note

- [Switch Shooting Mode] will only display when the mode dial is set to MY1/MY2/MY3.
- When [Reg. My Settings] (☞P.185) is set to scene mode, [Switch Shooting Mode] will not be displayed even when MY1/MY2/MY3 is selected.

Shooting Movies

You can shoot movies with sound.
You can set the image size to 640 × 480 or 320 × 240 pixels.
You can set the number of frames shot per second (frame rate) to either 30 or 15.
Each movie you shoot is recorded as an AVI file.



1 **Turn the mode dial to SCENE.**
- The camera is ready to shoot and the selected scene mode is displayed at the top of the picture display.

2 **Press the MENU/OK button.**
- The scene mode selection screen appears.

3 **Press the ▲▼◀▶ buttons to select [Movie].**

4 **Press the MENU/OK button.**

5 **Press the shutter release button to begin recording the movie.**
- Recording continues until you press the shutter release button again.

6 **Press the shutter release button to finish recording the movie.**

Caution----------
- While shooting movies, operation sounds may be recorded.
- The maximum recording time per shooting depends on the size of your SD memory card. (☞P.147) Even if you are within the maximum recording time, recording may end depending on your card.
- The maximum recording time per shooting is 90 minutes or the equivalent of 4 GB.
- The camera shake correction function does not work in movie mode. If you set the mode dial to [Movie] while the camera shake correction function is enabled, disappears from the picture display.

Note

- The flash cannot be used.
- While shooting movies, only digital zoom can be used. (☞P.38)
- When the shutter release button is pressed in Step 5, the camera focuses on the subject.
- The remaining recording time may not change uniformly because it is recalculated from the remaining memory capacity during movie recording.
- Use the shooting menu to set the image size and frame rate of movies.
- The shooting menu items for movie mode differ from those in still image mode. (☞P.96)
- Depending on the remaining battery level, the battery may become depleted during movie shooting. Use of a battery with adequate remaining power or the AC adapter (sold separately) is recommended.
- Use of a high speed SD memory card with sufficient memory is recommended when shooting for long periods.

Setting the Frame Rate (Frame Rate)

You can select the number of shot frames per second (frame rate) in movie mode.

1 **In scene mode, select [Movie].**

2 **Press the MENU/OK button.**

- The scene mode selection screen appears.

3 **Press the ▲ button.**

4 **Press the ▶ button.**

- The shooting menu is displayed.

5 **Press the ▼ button to select [Frame Rate] and press the ▶ button.**

6 **Press the ▲▼ buttons to select [30Frame/S] or [15Frame/S].**

7 **Press the MENU/OK button.**

- The setting appears on the screen.

Movie frames----------

Movies consist of many frames whose images appear to be moving when displayed at high speed.

Note----------

- Movie recording time may vary depending on the capacity of the recording destination (internal memory or SD memory card), shooting conditions, and the type and manufacturer of the SD memory card.
- The estimated total recording time is shown below. The maximum recording time per shooting is 90 minutes or the equivalent of 4 GB.

	Internal Memory	512 MB	1 GB	2 GB	4 GB	8 GB	16 GB
640 × 480 (15Frame/S)	1 Min. 22 Sec.	12 Min. 19 Sec.	24 Min. 2 Sec.	48 Min. 13 Sec.	94 Min. 40 Sec.	193 Min. 30 Sec.	394 Min. 53 Sec.
640 × 480 (30Frame/S)	41 Sec.	6 Min. 14 Sec.	11 Min. 59 Sec.	24 Min. 23 Sec.	47 Min. 54 Sec.	97 Min. 55 Sec.	199 Min. 49 Sec.
320 × 240 (15Frame/S)	2 Min. 40 Sec.	24 Min. 5 Sec.	46 Min. 19 Sec.	94 Min. 11 Sec.	184 Min. 57 Sec.	378 Min. 2 Sec.	771 Min. 25 Sec.
320 × 240 (30Frame/S)	1 Min. 22 Sec.	12 Min. 19 Sec.	24 Min. 2 Sec.	48 Min. 13 Sec.	94 Min. 40 Sec.	193 Min. 30 Sec.	394 Min. 53 Sec.

Playing Back Movies

To playback movies, follow the steps below.

1 Press the ▶ (Playback) button.

- The last movie shot is displayed.
- The first frame of the movie is displayed as a still image.

2 Select the movie you want to view using the ▲▼◀▶ buttons.

- Press the ▶ button to display the next file.
- Press the ◀ button to display the previous file.
- Press the ▲ button to display the file 10 frames backward.
- Press the ▼ button to display the file 10 frames forward.

3 Press the ADJ. lever.

- Playback begins.
  The elapsed playback indicator or the elapsed time is displayed on the screen.

Fast Forward	Press the Q button during playback.
Rewind	Press the ⊠ button during playback.
Pause/Playback	Press the ADJ. lever.
Slow Playback	Press and hold the Q button during pause.
Slow Rewind	Press and hold the ⊠ button during pause.
Next Frame	Press the Q button during pause.
Previous Frame	Press the ⊠ button during pause.
Volume Adjustment	Press the ▲▼ buttons during playback.

Note

If the ADJ. lever is pressed to the left or right to move to the previous or next images when an enlarged still image is displayed, the images will return to actual size when the movies is displayed.

Playback Menu

Press the MENU/OK button in playback mode to display the playback menu. The playback menu allows you to make the settings for the following functions.

Setting	Options	Refer to
Slide Show	———	P.151
Protect	Select/Cancel 1 File, Select/Cancel All Files, Select Multi-Files	P.152
DPOF	Select/Cancel 1 File, Select/Cancel All Files, Select Multi-Files	P.155
Resize	1280, 640	P.158
Copy To Card	———	P.160
Skew Correction	———	P.161
Level Compensation	Auto, Manual	P.163
White Balance Compensation	———	P.167

Note

The setup menu can be accessed from within the playback menu. (☞P.177)

Using the Menu

1 **Press the ▶ (Playback) button to select the playback mode.**

2 **Press the MENU/OK button.**

- The playback menu appears.

The menu items are provided on two screens.

3 **Press the ▲▼ buttons to select the desired item.**

- If the ADJ. lever or the DISP. button is pressed at this point, the display returns to the screen shown in Step 2.
- Press the ▼ button at the bottom item to display the next screen.

4 **Press the ▶ button.**

- The screen for the selected menu item appears.

Changing the display ----------

Press the ◀ button to select a tab on the left of the screen. (If the ADJ. lever or the DISP. button is pressed at this point, the display returns to the screen shown in Step 2.)

- Press the ▲▼ buttons to change screens.
- Press the ▶ button to return to menu item selection.

Displaying Photos in Order Automatically (Slide Show)

You can display the recorded still images and movie files sequentially on the screen. This is called a slide show. To view a slide show, follow the steps below.

1 **Press the ▶ (Playback) button.**

- The last file recorded is displayed.

2 **Press the MENU/OK button.**

- The playback menu appears.

3 **Press the ▼ buttons to select [Slide Show] and press the ▶ button.**

- The slide show starts and files are played back in order.
- If you want to stop the slide show in progress, press any button on the camera.
  The slide show repeats itself until stopped.

Note ----------

- Each still image is displayed for three seconds.
- For movies, not just one frame, but the entire movie you shot is played back.

Preventing the Deletion of Files (Protect)

You can protect files from being accidentally deleted.

Caution----------

Protected files cannot be deleted normally. However, they will be deleted if you format the memory where the files are stored.

Protecting a File

1 **Press the ▶ (Playback) button.**

- The last file recorded is displayed.

2 **Press the ▲▼◀▶ buttons to display the file you want to protect.**

3 **Press the MENU/OK button.**

- The playback menu appears.

4 **Press the ▼ button to select [Protect] and press the ▶ button.**

5 **Make sure that [1 File] is selected, and then press the MENU/OK button.**

- The selected file is protected and the symbol appears on the screen.

Note

To unprotect a file, display the file you want to unprotect and perform Steps 3 to 5.

Protecting All Files

To protect all your files, follow the steps below.

1 **Press the ▶ (Playback) button.**

2 **Press the MENU/OK button.**

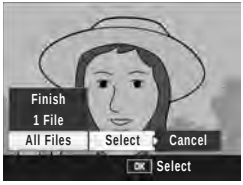
- The playback menu appears.

3 **Press the ▼ button to select [Protect] and press the ▶ button.**

4 **Press the ▲▼ buttons to select [All Files].**

5 **Make sure that [Select] is selected, and then press the MENU/OK button.**

- All files are protected and the symbol appears on the screen.



Note

To cancel protection for all protected files, select [Cancel] in Step 5.

Protecting Multiple Files at Once

To protect selected files all at once, follow the steps below.

1 **Press the ▶ (Playback) button.**

2 **Press the ⊞ (Thumbnail Display) button.**

- The screen is divided into 20 frames and thumbnails are displayed.

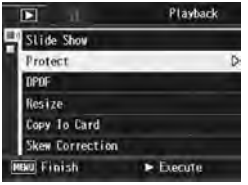
3 **Press the ▲▼◀▶ buttons to select the first file you want to protect.**

4 **Press the MENU/OK button.**

- The playback menu appears.

5 **Press the ▼ button to select [Protect] and press the ▶ button.**

- The Protect symbol appears in the upper-right corner of the file.



6 **Press the ▲▼◀▶ buttons to select the next file you want to protect, and then press the MENU/OK button.**

7 **Repeat Step 6 to select all the files you want to protect.**

- If you selected a file by mistake, you can deselect by selecting the file and pressing the MENU/OK button again.

8 **Press the DISP. button.**

- The display indicates that the selected images are being processed; once finished, the display returns to the thumbnail display screen.

Note ----------

- To unprotect multiple files, follow the same steps described above to select the files to unprotect, and then press the DISP. button.
- You can also unprotect all files at once. (☞P.153)

Using a Printing Service (DPOF)

The still images recorded on an SD memory card can be printed out if you take them to a store that offers a digital camera print service. To use a print service, you must make print settings on your camera. These settings are called Digital Print Order Format (DPOF) settings.
The DPOF setting specifies one print per still image. When making DPOF settings in grid view, you can also specify the number of copies to print. (☞P.157)

Note

When you make DPOF settings for images shot in RAW mode, DPOF settings are only made for JPEG files.

Setting DPOF for the Displayed Still Image

1 **Press the ▶ (Playback) button.**

2 **Press the ▲▼◀▶ buttons to display the still image for which you want to make the DPOF setting.**

3 **Press the MENU/OK button.**

- The playback menu appears.

4 **Press the ▼ button to select [DPOF] and press the ▶ button.**

5 **Make sure that [1 File] is selected, and then press the MENU/OK button.**

- Once the DPOF setting is made, the DPOF symbol appears on the screen.

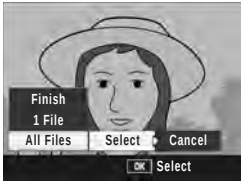
Note

To remove the DPOF setting, display the still image with the DPOF setting and perform Steps 3 to 5.

Setting DPOF for All Still Images

To apply DPOF settings to all your still images, follow the steps below.

1. **Press the ▶ (Playback) button.**
2. **Press the MENU/OK button.**
   - The playback menu appears.
3. **Press the ▼ button to select [DPOF] and press the ▶ button.**
4. **Press the ▲▼ buttons to select [All Files].**
5. **Make sure that [Select] is selected, and then press the MENU/OK button.**
   - Once the DPOF setting is made, the DPOF symbol appears on the screen.



Note

To cancel the DPOF settings for all still images with DPOF settings, select [Cancel] in Step 5.

Setting DPOF for Multiple Still Images

To make the DPOF settings for selected still images all at once, follow the steps below.

1 **Press the ▶ (Playback) button.**

2 **Press the ⊞ (Thumbnail Display) button.**
- The screen is divided into 20 frames and thumbnails are displayed.

3 **Press the ▲▼◀▶ buttons to select the first still image for which you want to make the DPOF setting.**

4 **Press the MENU/OK button.**
- The playback menu appears.

5 **Press the ▼ button to select [DPOF] and press the ▶ button.**

6 **Press the ▲▼ buttons to set the number of copies to print.**
- Press the ▲ button to increase the number of copies, or press the ▼ button to decrease the number of copies.

7 **Press the ▲▼◀▶ buttons to select the next still image for which you want to make the DPOF setting.**

8 **Press the ▲▼ buttons to set the number of copies to print.**
- Press the ▲ button to increase the number of copies, or press the ▼ button to decrease the number of copies.

9 **Repeat Steps 7 and 8 to select all the still images for which you want to make the DPOF setting.**

10 **Press the MENU/OK button.**
- The display indicates that the selected images are being processed; once finished, the display returns to the thumbnail display screen.

Note
- To remove the DPOF settings for multiple still images, follow the same steps described above to set the number of copies to print to [0] for each image, and then press the MENU/OK button.
- You can also cancel the DPOF settings for all still images at once. (☞P.156)

Changing the Image Size (Resize)

You can reduce the image size of a shot still image to create a new file with a different image size.

Original	Resized	
F4000/N4000/F3:2/N3:2/F1:1/N1:1/N3264/ N2592/N2048	N1280	N640
N1280	N640	

Caution----------

- You can resize only still images. Movies cannot be resized.
- You cannot change the image size of images shot in RAW mode.

Note----------

- The ratio of width to height of [F3:2] and [N3:2] images are 3:2. When an image of this type is resized, it is reduced to a 4:3 image with black borders at the top and bottom.
- The ratio of width to height of [F1:1] and [N1:1] images are the same (1:1). When an image of this type is resized, it is reduced to a 4:3 image with black borders on the left and right.
- You can also change the image size during shooting. (☞P.99)

To change the image size, follow the steps below.

1 **Press the ▶ (Playback) button.**

2 **Press the ▲▼◀▶ buttons to display the file with the image size you want to change.**

3 **Press the MENU/OK button.**

- The playback menu appears.

4 **Press the ▼ button to select [Resize] and press the ▶ button.**

5 **Press the ▲▼ buttons to select [1280] or [640].**

6 **Press the MENU/OK button.**

- Messages appear during the correction process, and then the corrected image is recorded. The original image remains unchanged.

Copying the Contents of the Internal Memory to an SD Memory Card (Copy To Card)

You can copy all movies, still images, and sound data stored in the internal memory onto an SD memory card at once.

1. **Turn the camera off.**
2. **Insert an SD memory card.**
3. **Turn the camera on.**
4. **Press the ▶ (Playback) button.**
5. **Press the MENU/OK button.**
   - The playback menu appears.
6. **Press the ▼ button to select [Copy To Card] and press the ▶ button.**
   - The display indicates copying is in progress; once finished, the display returns to the playback screen.

Note

- If the capacity of the SD memory card to which you are copying is insufficient, a message will be displayed indicating there is not enough capacity. To copy only the number of shots that will fit into the available capacity, select [Yes] and then press the MENU/OK button. To cancel copying, select [No] and then press the MENU/OK button.
- It is not possible to copy the contents of an SD memory card to the internal memory.

Straightening Skewed Images (Skew Correction)

You can straighten rectangular objects, such as a message board or business card, shot at an angle, to make them look as if they were shot squarely.

1 **Press the ▶ (Playback) button.**

2 **Press the ▲▼◀▶ buttons to display the file you want to straighten.**

3 **Press the MENU/OK button.**

- The playback menu appears.

4 **Press the ▼ button to select [Skew Correction] and press the ▶ button.**

- The display indicates that the image is being processed, and then the area recognized as the correction range is displayed with an orange frame. Up to five areas can be recognized.
- If the target area cannot be detected, an error message appears. The original image remains unchanged.
- To select another correction area, move the orange frame to the target area by pressing the ▶ button.
- To cancel skew correction, press the ▲ button. Even if you cancel skew correction, The original image remains unchanged.

5 **Press the MENU/OK button.**

- The display indicates that the image is being corrected, and then the corrected image is recorded. The original image remains unchanged.

Caution----------

- You can use skew correction for still images shot with this camera.
- You cannot use skew correction for movies or images taken with S-Cont or M-Cont.
- For images shot in RAW mode (☞P.99), the skew is corrected in the JPEG file recorded at the same time as the raw data. No skew is corrected in the DNG file.

Note ----------

- The image size does not change for skew corrected images.
- If the image size is large, skew correction will take time. Resize the image (☞P.158) before performing skew correction to speed up the process.
- The following table shows the approximate time required for skew correction.

Image Size	Correction time
4000 × 3000	Approx. 60 seconds
2592 × 1944	Approx. 24 seconds
2048 × 1536	Approx. 14 seconds
1280 × 960	Approx. 6 seconds
640 × 480	Approx. 2 seconds

- When scene mode is set to [Skew Correct Mode], you can shoot an image and then immediately correct any skew in the image. (☞P.91)

Correcting the Image Brightness and Contrast (Level Compensation)

You can use either [Auto] or [Manual] mode to correct the brightness and contrast in still images you have shot and then record the corrected images. [Manual] mode allows you to correct the image by adjusting the histogram.

Note ----------

See P.63 for more information on the histogram display.

1 **Press the ▶ (Playback) button.**

2 **Press the ▲▼◀▶ buttons to display the file you want to correct.**

3 **Press the MENU/OK button.**

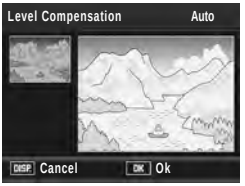
- The playback menu appears.

4 **Press the ▼ button to select [Level Compensation] and press the ▶ button.**

Correcting Images Automatically (Auto)

5 **Press the ▲▼ buttons to select [Auto] and press the ▶ button.**

- The [Level Compensation] screen appears. The original image appears at the upper left of the screen and the corrected image is shown on the right.
- If you select a file that cannot use level compensation, an error message appears and you are returned to the playback menu.
- To cancel level compensation, press the DISP. button.



6 **Press the MENU/OK button.**

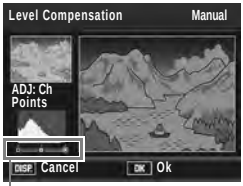
- Messages appear during the correction process, and then the corrected image is recorded. The original image remains unchanged.

Correcting Images Manually (Manual)

5 Press the ▲▼ buttons to select [Manual] and press the ▶ button.

- The [Level Compensation] screen appears. The original image appears at the upper left of the screen, the histogram is at the lower left, and the corrected image is shown on the right.
- If you select a file that cannot use level compensation, an error message appears and you are returned to the playback menu.
- To cancel level compensation, press the DISP. button.

6 Press the ADJ. lever to switch between points on the histogram.



Points

- A histogram shows the number of pixels on the vertical axis and the brightness on the horizontal axis, ranging from shadows (dark areas) on the left through midtones to highlights (bright areas) on the right. Each time you press the ADJ. lever, the selected point switches from the left point, to the middle point and then to the right point.

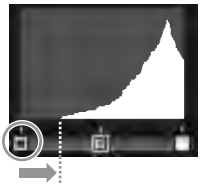
7 Press the ◀▶ buttons to correct the image by adjusting the location of the selected point.

- Moving the left or right point moves the middle point also.

Sample correction methods ----------

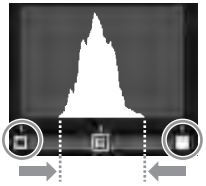
- Example 1) To adjust the overall image brightness:
  Select the middle point and move it to the left to brighten the entire image.
  Selecting the middle point and moving it to the right darkens the entire image.

- Example 2) To correct an overexposed or underexposed image:
  If the image in overexposed, move the left point to the right so that it is aligned with the left end of the histogram peaks.
  If the image in underexposed, move the right point to the left so that it is aligned with the right end of the histogram peaks.
  You can then adjust the overall image brightness by moving the middle point left or right.



Overexposed image

- Example 3) To boost the contrast in an image:
  If an image is lacking in contrast, the histogram peaks are concentrated toward to the center. By aligning the left and right points with the respective ends of the histogram peaks, you can create an image with clearly defined bright and dark areas. You can then adjust the overall image brightness by moving the middle point left or right.



8 Press the MENU/OK button.

- Messages appear during the correction process, and then the corrected image is recorded. The original image remains unchanged.

Caution----------

- You can only use level compensation for still images shot using this camera.
- You cannot use level compensation for images shot in Movie, S-Cont or M-Cont mode.
- This function may not have any effect for images shot using [Text Mode] in scene mode, or images shot when [Image Settings] is set to [B&W] or [B&W(TE)].
- While you can use level compensation repeatedly, the image is recompressed each time and there will be some decline in image quality.

Correcting the Image Color Tone (White Balance Compensation)

This function allows you to correct the green, magenta, blue and amber color tones in still images you have taken and then record the corrected images.

1 **Press the ▶ (Playback) button.**

2 **Press the ▲▼◀▶ buttons to display the file you want to correct.**

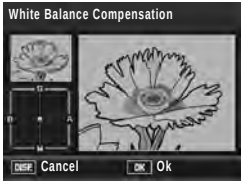
3 **Press the MENU/OK button.**

- The playback menu appears.

4 **Press the ▼ button to select [White Balance Compensation] and press the ▶ button.**

- The [White Balance Compensation] screen appears. The original image appears at the upper left of the screen, the white balance compensation map is at the lower left, and the corrected image is shown on the right.
- If you select a file that cannot use white balance compensation, an error message appears and you are returned to the playback menu.

5 **Press the ▲▼◀▶ buttons or the ADJ. lever left or right to move the point around the white balance compensation map and adjust the color tones.**



- Press the ▲▼◀▶ buttons to move the point around the white balance compensation map. [G] denotes green, [A] denotes amber, [M] denotes magenta and [B] denotes blue, and the color tones change toward the respective colors depending on the location of the point.
- To cancel white balance compensation, press the DISP. button.
- Press the 🗑 button to reset the color tone while correcting.

6 Press the MENU/OK button.

- Messages appear during the correction process, and then the corrected image is recorded. The original image remains unchanged.

Caution----------

- You can only use white balance compensation for still images shot using this camera.
- You cannot correct the white balance for images shot in Movie, S-Cont or M-Cont mode.
- This function may not have any effect for images shot using [Text Mode] in scene mode, or images shot when [Image Settings] is set to [B&W] or [B&W(TE)].
- While you can use white balance compensation repeatedly, the image is recompressed each time and there will be some decline in image quality.
- You can correct the white balance when shooting. (☞P.138)

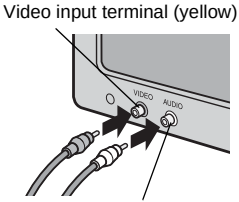
Viewing on a Television

You can view files you have taken on a TV screen. The camera displays everything on the TV screen just as it would on the picture display.

To use your television for viewing, connect your camera to the television with the AV cable that came with your camera. To view files on a television, follow the steps below.

1 **Securely connect the AV cable to the Video In terminal on the television.**

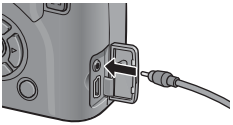
- Connect the white plug of the AV cable to the audio input terminal (white) of the TV unit and the yellow plug to the video input terminal (yellow).



2 **Make sure that the camera is off.**

3 **Open the terminal cover.**

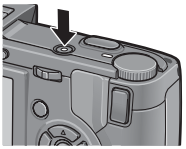
4 **Securely connect the AV cable to the AV output terminal on the camera.**



5 **Set the television to Video mode. (Set the input to Video)**

- For details, see the documentation that came with the television.

6 **Press the POWER button or the ▶ (Playback) button for more than one second to turn the camera on.**



Caution----------

- When the AV cable is connected to the camera, the indicators on picture display or the LCD viewfinder (VF-1) disappear and the speaker output turns off.
- Do not force the AV cable into the terminal.
- Do not apply excessive force with the AV cable connected.
- When using the AV cable, do not move the camera with the AV cable.

Note----------

- You can connect the AV cable to the Video In terminal on your video recorder and record what you have shot to a video recorder.
- Your camera is set to NTSC video format (used in North America and other countries/regions) for use with television equipment and other audiovisual equipment. If the equipment you want to connect to uses PAL format (used in Europe and elsewhere), then switch your camera to PAL format before connecting. (☞P.211)
  The default setting varies depending on where you purchased the camera.

Direct Print Function

The direct print standard enables direct printing from a camera to a printer by connecting them via a USB cable. Photos can be printed quickly and easily from your digital camera without using a computer.

Caution----------

- You cannot print movies (.AVI files) with this function.
- For images shot in RAW mode, the JPEG file recorded at the same time as the raw data is printed. The DNG file is not printed.

Note----------

- This camera uses PictBridge, an industry standard for direct printing.
- Your printer must be compatible with PictBridge to use the direct print function. For support information, see the documentation that came with the printer.

Connecting the Camera to a Printer

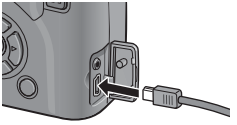
Connect your camera to a printer using the USB cable provided.

1 **Make sure that the camera is off.**

2 **Open the terminal cover.**

3 **Connect your camera to a printer using the USB cable provided.**

- Your camera turns on automatically.
- Turn on the printer if it is not already on.



Caution----------

- Do not force the USB cable into the terminal.
- Do not apply excessive force with the USB cable connected.
- When using the USB cable, do not move the camera with the USB cable.

Note----------

To disconnect the camera from the printer, check that the camera is turned off after printing is finished, and disconnect the USB cable.

Printing Still Images

You can print still images from the camera with a PictBridge-compatible printer.
Still images are sent from the internal memory when no SD memory card is loaded or from an SD memory card when one is loaded.

Caution----------

Do not disconnect the USB cable during printing.

Note----------

- If a [Printer Error] message appears during image transfer, check the printer status and take the appropriate action.
- If a computer connection message appears even though the camera is connected to the printer, reconnect the camera and press the ADJ. lever within 2 seconds.

Printing One or All Still Images

1 **Check that the printer is ready to print.**
   - The [Connecting...] screen appears.

2 **Press the ADJ. lever.**
   - The direct print playback mode screen appears.

3 **Press the ▲▼◀▶ buttons to select an image for printing.**

4 **Press the ADJ. lever.**

5 **Press the ▲▼ buttons to select [1 File] or [All Files].**

6 **Press the MENU/OK button.**
   - The direct print menu appears.

7 Press the ▲▼ buttons to select an item, and then press the ▶ button to display the detailed options screen.

- When [Connecting...] is displayed, the connection to the printer is not yet established. When a connection is established, [Connecting...] disappears and [Direct Print] appears. Proceed with this step after the connection is established.
- The following items can be selected. Each item is available only when supported by the printer connected to the camera.

Item Name	Description
Paper Size	Sets the paper size.
Paper Type	Sets the paper type.
Layout	Sets the number of images printed on a sheet of paper. The number of images that can be laid out on a sheet of paper varies depending on the connected printer.
Date Print	Selects whether to print the date (shooting date). The date format can be set using the date/time option in the setup menu.
File Name Print	Selects whether to print the file name.
Optimize Image	Selects whether to optimize the image data (still image) prior to printing on the printer.
Print Size	Sets the print image size.
Print Quality	Sets the print quality.

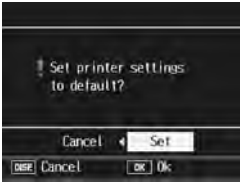
8 Press the ▲▼ buttons to select the setting, and then press the MENU/OK button.

- The display returns to the direct print menu.

9 Repeat Steps 7 and 8 to change other settings as required.

Note ----------

- To specify the settings as the default settings next time the camera is connected to the printer, press the ADJ. lever when the screen in Step 7 is displayed. When the screen at the right appears, press the ◀▶ buttons to select [Set] and press the MENU/OK button.
- To use the settings last set the next time the camera is connected to the printer, select [Cancel].



10 **Press the MENU/OK button.**

- The selected still images are sent to the printer and the [Sending...] screen appears.
- Pressing the DISP. button cancels the operation.
- When the images have been sent to the printer, the display returns to the direct print playback mode screen and printing starts.

Printing Several Still Images

1 **Check that the printer is ready to print.**

- The [Connecting...] screen appears.

2 **Press the ADJ. lever.**

- The direct print playback mode screen appears.

3 **Press the ⊠ (Thumbnail Display) button.**

- The screen is divided into 20 frames and thumbnails are displayed.

4 **Press the ▲▼◀▶ buttons to select an image for printing.**

5 **Press the MENU/OK button.**

6 **Press the ▲▼ buttons to set the number of copies to print.**

- Press the ▲ button to increase the number of copies, or press the ▼ button to decrease the number of copies.

7 **Press the ◀▶ buttons to select the next image for printing.**

8 **Press the ▲▼ buttons to set the number of copies to print.**

9 **Repeat Steps 7 and 8 to select all the still images to be printed and the number of copies for each.**

10 **Press the MENU/OK button.**

- The direct print menu appears.

11 Press the ▲▼ buttons to select an item, and then press the ▶ button to display the detailed options screen.

- When [Connecting...] is displayed, the connection to the printer is not yet established. When a connection is established, [Connecting...] disappears and [Direct Print] appears. Proceed with this step after the connection is established.
- For available settings, see P.174.

12 Press the ▲▼ buttons to select the setting, and then press the MENU/OK button.

- The display returns to the direct print menu.

13 Repeat Steps 11 and 12 to change other settings as required.

14 Press the MENU/OK button.

- The selected still images are sent to the printer and the [Sending...] screen appears.
- Pressing the DISP. button cancels the operation.
- When all the selected still images have been sent from the camera to the printer, the camera display returns to the direct print playback mode screen.

Note ----------

- Only images with a printer symbol ( ) are printed. If you cancel printing and then try to print again, make sure that the printer symbol is on the images you want to print.
- The same still image can also be printed several times on a single sheet.
- The available items vary depending on the functions of the printer.
- To print images using the printer's default settings, select [Printer Select] on the detailed options screen.

Setup Menu

You can change the camera settings by displaying the setup menu from the shooting menu (☞P.94) or playback menu (☞P.149). The setup menu enables you to set the items listed in the table below.

Setting	Options [Default Settings]	Refer to
Format [Card]	———	P.180
Format [Internal]	———	P.181
LCD Brightness	———	P.182
Conversion Lens	[Off], WIDE[DW-6], TELE[TC-1], Start Sel.	P.183
Reg. My Settings	[MY1], MY2, MY3	P.185
Step Zoom	On, [Off]	P.187
ISO Auto-High	AUTO 200, [AUTO 400], AUTO 800, AUTO1600	P.188
Set Fn1 Button *1 Set Fn2 Button *2	Off, [AF/MF] *1, AF/Snap, [AE Lock] *2, JPEG>RAW, Color>B&W, Color>TE, Expo. Cmp, Wht. Bal., WB Correct, ISO, Quality, Focus, Image, Expo. Met., Cont Mode, Auto BKT, MoveTarget, Flash Comp, Flash Amt.	P.189
Fn Set. My Set.	On, [Off]	P.191
Operation Sounds	[All], LevelSound, Shutter	P.192
Vol. Settings	□ □ □ (Mute), ■ □ □ (Small), [■ ■ □] (Medium), ■ ■ ■ (Large)	P.193
ADJ Lever Set.1 *1 ADJ Lever Set.2 *2 ADJ Lever Set.3 *3 ADJ Lever Set.4 *4	Off, [Expo. Cmp] *1, [Wht. Bal.] *2, WB Correct, [ISO] *3, [Quality] *4, Focus, Image, Expo. Met., Cont Mode, Auto BKT, Flash Comp, Flash Amt.	P.194
ADJ Shutter	On, [Off]	P.195
Level Setting	[Off], Display, Display + Snd, Sound	P.196
AF Aux. Light	[On], Off	P.197
Digital Zoom Img	[Normal], Auto Resize	P.198
Auto Power Off	Off, [1 Min.], 5 Min., 30Min.	P.200
Playback Screen	[LCD], VF	P.201
LCD Confirm.	Off, [0.5 Sec.], 1 Sec., 2 Sec., 3 Sec., Hold	P.202
Auto Rotate	[On], Off	P.203
CL-BKT B&W (TE)	[On], Off	P.205
RAW/JPEG Setting	[Fine], Normal, N640	P.206

Setting	Options [Default Settings]	Refer to
Sequential No.	[On], Off	P.207
Date Settings	————	P.209
Language/言語 *	日本語, English, Deutsch, Français, Italian, Español,Русский, 简体中文, 繁体中文, 한국어	P.210
Video Out Mode *	NTSC, PAL	P.211

* The default setting varies depending on where you purchased the camera.

Using the Setup Menu

In the instructions of this manual, the menu selection is confirmed when you "Press the MENU/OK button" (as in Step 6 below), but you can also confirm the setting and return to the menu screen by pressing the ◀ button.

1 Press the MENU/OK button.

- The shooting menu (or the playback menu) appears.

2 Press the ▶ button.

- The setup menu appears.
- In scene mode, press the ▲ button once or twice to select the [MODE] tab, and then press the ▶ button twice. The setup menu appears.

The menu items are provided on five screens.

3 Press the ▲▼ buttons to select the desired item.

- If the ADJ. lever or the DISP. button is pressed at this point, the display returns to the screen shown in Step 2.
- Press the ▼ button at the bottom item to display the next screen.

4 Press the ▶ button.

- The menu item settings are displayed.

5 Press the ▲▼ buttons to select the setting.

6 Press the MENU/OK button.

- The setup menu disappears and the camera is ready for shooting or playback.
- The setup menu may appear depending on the setting. In this case, press the MENU/OK button again to return to the shooting or playback screen.
- Pressing the ◀ button in Step 6 confirms the setting and the display returns to the screen shown in Step 3.

Note ----------

For some functions, the setting selection method may differ from what is explained here. For detailed operation, see the explanation of each function.

Changing the display ----------

Press the ◀ button to select a tab on the left of the screen. (If the ADJ. lever or the DISP. button is pressed at this point, the display returns to the screen shown in Step 2.)

- Press the ▲▼ buttons to change screens.
- Press the ▶ button to return to menu item selection.

Preparing the SD Memory Card (Format [Card])

If the error message [Card Error] is displayed when an SD memory card is loaded into the camera or the card has been used with a computer or other digital camera, you must format the card with this camera prior to use.
Formatting is the process of preparing a card so image data can be written on it.

Caution----------

If you format a card that still has images stored on it, the images will be lost.

To format the internal memory, follow the steps below.

1 **Display the setup menu.**

- For the operating procedure, see P.178.

2 **Press the ▼ button to select [Format [Card]] and press the ▶ button.**

- A screen appears to confirm formatting.

3 **Press the ◀▶ buttons to select [Yes] and then press the MENU/OK button.**

- Formatting starts. When it is done, the display returns to the setup menu.
- If no SD memory card is loaded, a message will be displayed. After turning the power off, load an SD memory card and repeat the formatting process again.

4 **Press the MENU/OK button.**

Protecting your images from being deleted----------

- Move the write-protection switch on the SD memory card to "LOCK" to prevent your still images from being accidentally erased or the card from being formatted. (☞P.29)
- Return the switch to its original position and disable "LOCK" to enable deletion and formatting.

Formatting the Internal Memory (Format [Internal])

If the error message [Format internal memory] is displayed, you must format the internal memory prior to use.

Caution----------

Formatting the internal memory deletes all of the data recorded in the memory. If you have images in the internal memory that you do not want to delete, copy the images to the SD memory card before formatting the internal memory. (☞P.160)

To format the internal memory, follow the steps below.

1 **Display the setup menu.**

- For the operating procedure, see P.178.

2 **Press the ▼ button to select [Format [Internal]] and press the ▶ button.**

- A screen appears to confirm formatting.

3 **Press the ◀▶ buttons to select [Yes] and then press the MENU/OK button.**

- Formatting starts. When it is done, the display returns to the setup menu.

4 **Press the MENU/OK button.**

Adjusting the brightness of the picture display (LCD Brightness)

To adjust the brightness of the picture display, follow the steps below.

1 **Display the setup menu.**

- For the operating procedure, see P.178.

2 **Press the ▼ button to select [LCD Brightness] and press the ▶ button.**

- The screen for setting the brightness appears.

3 **Press the ▲▼ buttons to adjust the brightness.**

- Move the slider on the LCD brightness adjustment bar down to make the picture display darker. Move it up to make it brighter. The brightness of the picture display changes as the slider is moved along the bar.

4 **When you reach the desired brightness, press the MENU/OK button.**

- The display returns to the setup menu.

5 **Press the MENU/OK button.**

Caution----------

You cannot adjust the brightness of the LCD viewfinder (VF-1).

Setting the Type of Conversion Lens (Conversion Lens)

When using the recommended wide conversion lens (DW-6) or tele conversion lens (TC-1), it is necessary to set which lens will be used.

Available Settings	Description
Off *Default setting	Even when a conversion lens is attached to the camera, the camera will not be recognize it as an attached conversion lens.
WIDE [DW-6]	When a conversion lens is attached to the camera, it will be recognized as a wide conversion lens (DW-6).
TELE [TC-1]	When a conversion lens is attached to the camera, it will be recognized as a tele conversion lens (TC-1).
Start Sel.	The conversion lens type selection screen always appears at the following times. This is useful when frequently using both the DW-6 and TC-1 lenses. • When the camera is turned on with a conversion lens attached • When the conversion lens is attached to the camera

1 **Display the setup menu.**

- For the operating procedure, see P.178.

2 **Press the ▼ button to select [Conversion Lens] and press the ▶ button.**

3 **Press the ▲▼ buttons to select the desired setting.**

4 Press the MENU/OK button.

When [WIDE[DW-6]] or [TELE[TC-1]] is selected:

- When the power is turned on with a conversion lens attached, or when a conversion lens is attached, a symbol indicating the conversion lens type is displayed momentarily at the center of the picture display, and then a smaller symbol is displayed at the lower right of the picture display.

When [Start Sel.] is selected:

- When the power is turned on with a conversion lens attached, or when a conversion lens is attached, the conversion lens type selection screen will display. Press the ▲▼ buttons to select the desired setting and then press the MENU/OK button. A symbol indicating the conversion lens type is displayed momentarily at the center of the picture display, and then a smaller symbol is displayed at the lower right of the picture display.

Caution----------

- When [Conversion Lens] is set to [TELE[TC-1]], even if the wide conversion lens (DW-6) is attached, the camera will recognize the attached lens as the tele conversion lens (TC-1). In addition, the opposite will be the same.
- When a lens with a different [Conversion Lens] setting is attached, shooting functions will not operate properly.

Registering Custom Settings (Reg. My Settings)

The My Settings function allows you to easily shoot with your desired settings.
You can register three groups of settings as “My Settings”. Setting the mode dial to MY1 allows you to shoot with the settings registered in [MY1]. Setting the mode dial to MY2 or MY3 allows you to shoot with the settings registered in [MY2] or [MY3]. (☞P.93)
To register the current camera settings as My Settings, follow the steps below.

1 **Change the camera settings to the values you want to register as My Settings.**

2 **Display the setup menu.**

- For the operating procedure, see P.178.

3 **Press the ▼ button to select [Reg. My Settings] and press the ▶ button.**

- A confirmation message appears.

4 **Select the setting, and then press the MENU/OK button.**

- The current camera settings are registered and the display returns to the setup menu.
- If you do not want to register them, press the DISP. button.

5 **Press the MENU/OK button.**

Settings Saved with My Settings Function

Shooting mode (📷/P/A/M/SCENE)
Focal distance used in manual focus
Scene Mode
Macro
Flash Mode
Zoom position
Self-Timer
DISP. Mode
Pic Quality/Size
Focus
Exposure Metering
Continuous Mode
Image Settings
Flash Expo. Comp.
Man. Flash Amount
Auto Bracket
WB-BKT
CL-BKT
Date Imprint
Camera Shake Cor
Exposure Cmp
White Balance
ISO Setting
Density
Frame Rate
Step Zoom
ISO Auto-High
Set Fn1/2 Button*
Level Setting
Digital Zoom Img
CL-BKT B&W (TE)

* [Set Fn1/2 Button] is saved in My Settings only when [Fn Set. My Set.] is set to [On].

Setting the Zoom to a Fixed Focal Length (Step Zoom)

Step zooming allows you to set the focal length of the zoom so that it stops at five levels (24, 28, 35, 50, 72 mm*).

* Equivalent to that on a 35mm camera

Available Settings
On (Step zooming on)
Off (Step zooming off) *Default setting

1 **Display the setup menu.**

- For the operating procedure, see P.178.

2 **Press the ▼ button to select [Step Zoom] and press the ▶ button.**

3 **Press the ▲▼ buttons to select [On].**

4 **Press the MENU/OK button.**

Note

- When using the wide conversion lens (DW-6), the available focal lengths with optical zooming are 19, 22, 28, 40, and 57 mm equivalent.
- The available focal lengths for zooming with the tele conversion lens (TC-1) attached are 45 mm, 53 mm, 64 mm, 92 mm, and 135 mm (Telephoto side) equivalent. With the tele conversion lens attached, zooming with a focal length other than 135 mm can result in vignetting (condition where the four corners appear dark).

Changing the ISO Auto-High Setting (ISO Auto-High)

You can change the upper limit of the ISO setting for [Auto-Hi] (Auto high sensitivity) (☞P.140) in [ISO Setting] on the shooting menu.

Available Settings
AUTO 200
AUTO 400 *Default setting
AUTO 800
AUTO1600

To change the auto high sensitivity setting, follow the steps below.

1 **Display the setup menu.**
- For the operating procedure, see P.178.

2 **Press the ▼ button to select [ISO Auto-High] and press the ▶ button.**

3 **Press the ▲▼ buttons to select the desired setting.**

4 **Press the MENU/OK button.**

Note ----------

Images shot with a higher sensitivity may appear grainy.

Assigning a Function to the Function Button (Set Fn1/2 Button)

When a function is assigned to the two Fn (Function) buttons, you can easily change the shooting menu setting, or switching from one function to another, simply by pressing the Fn1/Fn2 button.
Press the Fn1 button to use the function assigned to [Set Fn1 Button]. Press the Fn2 button to use the function assigned to [Set Fn2 Button].
The following functions can be assigned to the Fn1/Fn2 button. For information on how to use the Fn1/Fn2 button, see the corresponding reference page.

Available Settings	Description	Refer to
AF/MF *Default setting [Set Fn1 Button]	Switching between auto focus and manual focus.	P.73
AF/Snap	Switching between auto focus and snap mode.	P.75
AE Lock *Default setting [Set Fn2 Button]	Locking the exposure.	P.76
JPEG>RAW	Switching from JPEG to RAW mode.	P.77
Color>B&W	Switching from color to black-and-white mode. *1	P.78
Color>TE	Switching from color to black-and-white (TE) mode. *2	P.78
MoveTarget	Move both the AE and AF, or one or the other targets.	P.79
Expo. Cmp, Wht. Bal., WB Correct, ISO, Quality, Focus, Image, Expo. Met., Cont Mode, Auto BKT, Flash Comp, Flash Amt.	Changing the shooting menu function.	P.80

*1 Image quality when [B&W] is set in [Image Settings] (☞P.113)

*2 Image quality when [B&W (TE)] is set in [Image Settings] (☞P.114)

To assign a function to the Fn1/Fn2 button, follow the steps below.

1 **Display the setup menu.**

- For the operating procedure, see P.178.

2 **Press the ▼ button to select [Set Fn1 Button] or [Set Fn2 Button] and press the ▶ button.**

3 **Press the ▲▼ buttons to select the desired setting.**

4 **Press the MENU/OK button.**

Setting Whether to Save the Fn (Function) Button Function to My Settings (Fn Set. My Set.)

You can set whether the functions assigned to the Fn1/Fn2 buttons with [Set Fn1/2 Button] (☞P.71) are saved with [Reg. My Settings] (☞P.185).

Available Settings	Description
On	Save functions registered to the Fn1/Fn2 button with [Reg. My Settings].
Off *Default setting	Functions registered to the Fn1/Fn2 button with [Reg. My Settings] will not be saved.

1 **Display the setup menu.**

- For the operating procedure, see P.178.

2 **Press the ▼ button to select [Fn Set. My Set.] and press the ▶ button.**

3 **Press the ▲▼ buttons to select the desired setting.**

4 **Press the MENU/OK button.**

Changing the Operation Sound Setting (Operation Sounds)

The following five operation sounds are made during camera operation.

Start sound	:	Sound when the camera is turned on.
Shutter	:	Sound when the shutter release button is pressed.
Focus sound	:	Sound when the shutter release button is half-pressed and the camera focuses on the subject.
Beep Sound	:	Error sound indicating an operation that cannot be performed.
LevelSound	:	When [Level Setting] is set to [Sound] or [Disp + Snd] (☞P.196), the sound is continually emitted at a set interval when the camera is level in shooting mode.

Available Settings	Description
All *Default setting	All sounds on
LevelSound	Only the level sound will emit.
Shutter	Only the shutter sound and level sound will emit.

Note

If you try to perform an operation that cannot be performed, the beep sound can be heard regardless of the [Operation Sounds] setting.

1 **Display the setup menu.**

- For the operating procedure, see P.178.

2 **Press the ▼ button to select [Operation Sounds] and press the ▶ button.**

3 **Press the ▲▼ buttons to select the desired setting.**

4 **Press the MENU/OK button.**

Note

The operation sound setting can be changed. (☞P.193)

Changing the Operation Sound Volume (Vol. Settings)

You can change the operation sound volume.

Available Settings
□ □ □ (Mute)
■ □ □ (Small)
■ ■ □ (Medium) *Default setting
■ ■ ■ (Large)

To change the operation sound volume, follow the steps below.

1 **Display the setup menu.**

- For the operating procedure, see P.178.

2 **Press the ▼ button to select [Vol. Settings] and press the ▶ button.**

3 **Press the ▲▼ buttons to select the desired setting.**

4 **Press the MENU/OK button.**

Note

The level sound is not emitted, even when [Level Setting] is set to [Disp + Snd] or [Sound] and [Vol. Settings] is set to [□ □ □] (Mute) (☞P.196).

Assigning a Function to the ADJ. Lever (ADJ Lever Set.)

When any of a number of shooting functions is assigned to the ADJ. lever, you can display the screen for that function with fewer button operations and without displaying the shooting menu. You can also use [ADJ Lever Set.1] to [ADJ Lever Set.4] to assign a camera function that can be activated by pressing the ADJ. lever.
For information on how to use the ADJ. mode, see P.66.

Available Settings		Refer to
Off		-
Expo. Cmp	*Default setting for [ADJ Lever Set.1]	P.132
Wht. Bal.	*Default setting for [ADJ Lever Set.2]	P.134
WB Correct		P.138
ISO	*Default setting for [ADJ Lever Set.3]	P.140
Quality	*Default setting for [ADJ Lever Set.4]	P.99
Focus		P.102
Image		P.111
Expo. Met.		P.105
Continuous		P.106
Auto BKT		P.121
Flash Comp		P.118
Flash Amt.		P.119

To assign a function to [ADJ Lever Set.1] to [ADJ Lever Set.4], follow the steps below.

1 **Display the setup menu.**
- For the operating procedure, see P.178.

2 **Press the ▼ button to select [ADJ Lever Set.1], [ADJ Lever Set.2], [ADJ Lever Set.3], or [ADJ Lever Set.4], and then press the ▶ button.**

3 **Press the ▲▼ buttons to select the desired setting.**

4 **Press the MENU/OK button.**

Using the Shutter Release Button to Set a Setting in ADJ. Mode (ADJ Shutter)

In ADJ. mode (☞P.66), you usually press the MENU/OK button or the ADJ. lever to set a setting.
When [ADJ Shutter] is set to [On], you can also set a setting by half-pressing the shutter release button.

Available Settings	Description
On	Press the ADJ. lever, the MENU/OK button, or half-press the shutter release button to set the setting.
Off *Default setting	Press the ADJ. lever or the MENU/OK button to set the setting.

To change the shutter release button setting, follow the steps below.

1 **Display the setup menu.**
- For the operating procedure, see P.178.

2 **Press the ▼ button to select [ADJ Shutter] and press the ▶ button.**

3 **Press the ▲▼ button to select [On].**

4 **Press the MENU/OK button.**

Changing the Level Confirmation Setting (Level Setting)

When [Level Setting] is set to on, the camera uses a level indicator and sounds to let you know whether the image is level during shooting. You can select from the following level confirmation settings. For information on how to use the level function during shooting, see P.60.

Available Settings	Description
Off *Default setting	The level indicator will not display. The level sound will not emit.
Display	The level indicator will display. The level sound will not emit.
Disp + Snd	The level indicator appears on the screen and a level sound is emitted when the camera is level.
Sound	The level indicator will not display. A level sound is emitted when the camera is level.

1 **Display the setup menu.**

- For the operating procedure, see P.178.
- You can also press and hold the DISP. button in shooting mode to display the setting menu. If you pressed and held the DISP. button, skip to Step 3.

2 **Press the ▼ button to select [Level Setting] and press the ▶ button.**

3 **Press the ▲▼ buttons to select the desired setting.**

4 **Press the MENU/OK button.**

Note

- For information on how to use the level function during shooting, see P.60.
- The level function is not available when recording movies or during interval shooting.
- The level sound is not emitted, even when [Level Setting] is set to [Disp + Snd] or [Sound] and [Vol. Settings] is set to [□ □ □] (Mute).

Changing the AF Auxiliary Light Setting (AF Aux. Light)

You can set whether to use the AF auxiliary light when shooting with auto focus.
When [AF Aux. Light] is set to [On], the AF auxiliary light lights and the auto focus distance is measured when shooting in dark surroundings and when it is difficult for the camera to measure the auto focus distance.
To change the AF auxiliary light setting, follow the steps below.

1 **Display the setup menu.**

- For the operating procedure, see P.178.

2 **Press the ▼ button to select [AF Aux. Light] and press the ▶ button.**

3 **Press the ▲▼ buttons to select the desired setting.**

4 **Press the MENU/OK button.**

Using the Auto Resize Zoom (Digital Zoom Img)

This function allows you to crop and record a shot image. Conventional digital zoom enlarges a portion of an image to a set magnification. Whereas, auto resize zoom saves the cropped portion of the image, the image quality is not decreased, however the image size may become smaller. The image recording size changes depending on the auto resize zoom magnification.
Auto resize zoom is available only when [Pic Quality/Size] is set to 4000 × 3000. (☞P.99)

Available Settings

Available Settings	Description
Normal *Default setting	Normal digital zoom. Records the image at the image size set with [Pic Quality/Size].
Auto Resize	Automatically resizes and then records the image.

Note

The digital zoom is enabled when [Pic Quality/Size] is set to a size other than 4000 × 3000.

Zoom Magnification and Recorded Image Size

Zoom Magnification	Focal Length	Image Size
1.0×	72 mm (*)	4000 × 3000 (12M)
Approx. 1.2×	88 mm (*)	3264 × 2448 (8M)
Approx. 1.5×	111 mm (*)	2592 × 1944 (5M)
Approx. 2.0×	141 mm (*)	2048 × 1536 (3M)
Approx. 3.1×	225 mm (*)	1280 × 960 (1M)
Approx. 6.3×	450 mm (*)	640 × 480 (VGA)

(*) Equivalent to that on a 35mm camera

1 **Display the setup menu.**

- For the operating procedure, see P.178.

2 **Press the ▼ button to select [Digital Zoom Img] and press the ▶ button.**

3 **Press the ▲▼ buttons to select [Auto Resize].**

4 **Press the MENU/OK button.**

5 **With the camera ready to shoot, press the 🔍 (Enlarged View) button.**

- Each time the 🔍 button is pressed, the image size is resized by one setting.
- The size at which the image is recorded is displayed above the zoom bar.

Caution----------

- This function is not available when shooting with S-Cont or M-Cont, or when scene mode is set to [Skew Correct Mode]. If [Auto Resize] is set in these situations, the digital zoom is activated instead.
- This function is not available when [Pic Quality/Size] is set to RAW mode.
- When the auto resize zoom is used and picture quality is set to Fine mode, it will switch to Normal mode when recording.

Changing the Auto Power Off Setting (Auto Power Off)

If you do not operate the camera for a set period of time, it shuts off automatically to conserve battery power (Auto Power Off).
By default, auto power off is set to one minute, but you can change this setting.

Available Settings
Off (Auto Power Off is turned off)
1 Min. *Default setting
5 Min.
30 Min.

To change the auto power off setting, follow the steps below.

1 **Display the setup menu.**
- For the operating procedure, see P.178.

2 **Press the ▼ button to select [Auto Power Off] and press the ▶ button.**

3 **Press the ▲▼ buttons to select the desired setting.**

4 **Press the MENU/OK button.**

Note
- To continue using the camera after auto power off turned the camera off, press the POWER button to turn the camera on again. You can also press and hold the ▶ (Playback) button for more than one second to turn on the camera in playback mode.
- Auto power off does not work when the camera is connected to a computer or printer.
- When using interval shooting, the [Auto Power Off] setting is not valid and auto power off does not work.

Setting the Playback Screen Output Display (Playback Screen)

When you attach the recommended viewfinder (VF-1), you can set whether the playback screen will display on the picture display or the viewfinder. When the viewfinder is not attached, regardless of the [Playback Screen] setting, the playback screen will display on the picture display.

Available Settings	Description
LCD *Default setting	The playback screen will display on the picture display.
VF	When a viewfinder (VF-1) is attached, the playback screen will display on the viewfinder.

1 **Display the setup menu.**

- For the operating procedure, see P.178.

2 **Press the ▼ button to select [Playback Screen] and press the ▶ button.**

3 **Press the ▲▼ buttons to select the desired setting.**

4 **Press the MENU/OK button.**

Note

When the viewfinder (VF-1) is attached, you can press the VF/LCD button to switch between the viewfinder and the picture display.

Changing Image Confirmation Time (LCD Confirm.)

Immediately after you press the shutter release button and take a still image, the image taken is displayed on the screen for a moment so you can check it. By default, the image confirmation time is set to 0.5 second, but this can be changed.

Available Settings
Off (Image not displayed for confirmation)
0.5 Sec. *Default setting
1 Sec.
2 Sec.
3 Sec.
Hold (The image remains displayed until the next time you half-press the shutter release button.)

To change the image confirmation time, follow the steps below.

1 **Display the setup menu.**

- For the operating procedure, see P.178.

2 **Press the ▼ button to select [LCD Confirm.] and press the ▶ button.**

3 **Press the ▲▼ buttons to select the desired setting.**

4 **Press the MENU/OK button.**

Note

- When [LCD Confirm.] is set to [Hold], the displayed image can also be enlarged (☞P.51) or deleted (☞P.53).
- When [Pic Quality/Size] is set to RAW mode, the image will be only displayed for confirmation after it is recorded if [LCD Confirm.] is set to [Hold]. If [LCD Confirm.] is not set to [Hold], the display will return to the shooting screen immediately after the image is recorded.

Automatically Rotating the Playback Image (Auto Rotate)

You can set the camera to automatically rotate the image during playback according to the position of the camera.

Available Settings	Description
On *Default setting	The playback image is automatically rotated.
Off	The playback image is not automatically rotated.

When [Auto Rotate] is set to [On], the direction of the playback image will be as follows.

When you play back images with the camera held horizontally:

Images shot with the camera held horizontally will appear with the same horizontal orientation.

Images shot with the camera held vertically will automatically be rotated to a vertical orientation.

When you play back images with the camera held vertically:

Images shot with the camera held vertically will appear with the same vertical orientation.

Images shot with the camera held horizontally will automatically be rotated to a horizontal orientation.

When the camera is rotated during playback, the image is automatically rotated according to the camera position.

1 **Display the setup menu.**

- For the operating procedure, see P.178.

2 **Press the ▼ button to select [Auto Rotate] and press the ▶ button.**

3 **Press the ▲▼ buttons to make the setting.**

4 **Press the MENU/OK button.**

Caution----------

- The playback image is not automatically rotated, even when [Auto Rotate] is set to [On], in the following cases.
  - When playing back movies or images shot with S-Cont. or M-Cont.
  - In grid view (☞P.50)
  - When playing back images shot with the camera tilted too far forward or backward.
  - When playing back images upside-down (with the shutter release button facing down) or images shot upside-down.
  - When changing the camera position during magnified playback.
  - When the image is going through skew correction (the correction area is displayed) in playback mode (☞P.161)
- When playing back a slide show or viewing camera images on a TV, the camera is detected as being in the horizontal position even when [Auto Rotate] is set to [On]. In this case, when you play back images with the camera positioned vertically, images shot horizontally are not automatically rotated. The playback images are not automatically rotated even if you rotate the camera during playback.

Note----------

Images shot in multi-shot, auto bracket, white balance bracket, and color bracket are automatically rotated according to the orientation of the first image.

Setting the Recorded Image During Color Bracket Shooting (CL-BKT B&W (TE))

When [Auto Bracket] is set to [CL-BKT] and a still image is shot (☞P.124), the camera records three images - a black-and-white image, a color image, and a black-and-white (TE) image, or the camera records two images - a black-and-white image and a color image. Before taking a picture, use [CL-BKT B&W (TE)] on the setup menu to set whether the camera records three images - a black-and-white image, a color image, and a black-and-white (TE) image, or two images - a black-and-white image and a color image.

Available Settings	Description
On *Default setting	When [Auto Bracket] is set to [CL-BKT] on the shooting menu, a black-and-white image, a color image, and a black-and-white (TE) image are recorded.
Off	When [Auto Bracket] is set to [CL-BKT] on the shooting menu, a black-and-white image and a color image are recorded.

1 **Display the setup menu.**

- For the operating procedure, see P.178.

2 **Press the ▼ button to select [CL-BKT B&W (TE)] and press the ▶ button.**

3 **Press the ▲▼ buttons to make the setting.**

4 **Press the MENU/OK button.**

Note ----------

When [Image Settings] is set to [B&W (TE)] on the shooting menu, a black-and-white image, a color image, and a black-and-white (TE) image are recorded even when [CL-BKT B&W (TE)] is set to [Off].

Changing the RAW Mode JPEG Image Setting (RAW/JPEG Setting)

When shooting with [Pic Quality/Size] set to RAW mode (☞P.99), a JPEG file associated with the RAW format file (.DNG file) is recorded at the same time. You can change the picture quality and image size of this JPEG file.

Available Settings	Description
Fine *Default setting	Picture quality: Fine mode; Image size: Recorded at the same size as the RAW format file.
Normal	Picture quality: Normal mode; Image size: Recorded at the same size as the RAW format file.
N640	Picture quality: Normal mode; Image size: Recorded at 640 × 840. However, image size is recorded at 640 × 424 (3:2) for [RAW3:2] and 480 × 480 (1:1) for [RAW1:1].

To change the picture quality and image size settings of the JPEG file, follow the steps below.

1 **Display the setup menu.**
- For the operating procedure, see P.178.

2 **Press the ▼ button to select [RAW/JPEG Setting] and press the ▶ button.**

3 **Press the ▲▼ buttons to select the desired setting.**

4 **Press the MENU/OK button.**

Changing the File Name Setting (Sequential No.)

When you shoot a still image, it is stored on an SD memory card or in the internal memory with a consecutively numbered file name that is automatically assigned.
When you switch SD memory cards, you can set your camera to continue consecutive numbering from the previously loaded card.

Available Settings	Description
On (Continue numbering) *Default setting	File names are automatically assigned to still images you take, in the format of "M" followed by seven digits, from M0010001.jpg to M9999999.jpg. With this setting, file numbering is continued from one card to the next.
Off (Do not continue numbering)	File numbering is assigned, from MG0001.jpg to MG9999.jpg, for each SD memory card. When the file name reaches MG9999, no more data can be recorded to that card.

To change the file name setting, follow the steps below.

1 **Display the setup menu.**
- For the operating procedure, see P.178.

2 **Press the ▼ button to select [Sequential No.] and press the ▶ button.**

3 **Press the ▲▼ buttons to select the desired setting.**

4 **Press the MENU/OK button.**

Note ----------

- When data is recorded to the internal memory, files are assigned consecutively numbered file names, just as if [Sequential No.] is set to [Off].
- When images are transferred to a computer using DL-10 (☞P.221), the file being transferred is renamed and saved. The file is saved with the name "MG****.jpg" (where **** indicates a number) even if [Sequential No.] is set to [On].

Caution ----------

When the file name reaches MG9999 or M9999999, no more files can be saved. In this case, move image data from the SD memory card to the memory of the computer or a storage medium, and then format the SD memory card.

Setting the Date and Time (Date Settings)

You can shoot still images with the time or date stamped onto the picture.
The date/time setting on the setup menu is explained here.

1 **Display the setup menu.**

- For the operating procedure, see P.178.

2 **Press the ▼ button to select [Date Settings] and press the ▶ button.**

3 **Press the ▲▼◀▶ buttons to set the year, month, date and time.**

- You can press and hold the ▲▼ buttons to quickly raise or lower the setting.
- Press the ◀▶ buttons to move to the next item.

4 **In [Format], choose the date and time format.**

5 **Check the information on the screen and then press the MENU/OK button.**

- Once you have set the date and time, the display returns to the setup menu.

6 **Press the MENU/OK button.**

Note ----------

- If the battery is removed for more than one week, the date and time settings will be lost. These settings must be made again.
- To retain the date and time settings, load a battery with adequate remaining power for more than two hours.

Changing the Display Language (Language/言語)

You can change the language displayed on the picture display. The default setting varies depending on where you purchased the camera.

Available Settings
日本語 (Japanese)
English
Deutsch (German)
Français (French)
Italiano (Italian)
Español (Spanish)
Русский (Russian)
简体中文 (Simplified Chinese)
繁体中文 (Traditional Chinese)
한국어 (Korean)

To change the display language, follow the steps below.

1 **Display the setup menu.**

- For the operating procedure, see P.178.

2 **Press the ▼ button to select [Language/言語] and press the ▶ button.**

- The language selection screen appears.

3 **Press the ▲▼◀▶ buttons to select the desired setting.**

4 **Press the MENU/OK button.**

- Once you have set the language, the display returns to the setup menu.

5 **Press the MENU/OK button.**

Changing the Playback Method for Viewing on TV (Video Out Mode)

You can view your still images and movies on a television screen by connecting your camera to a television with the AV cable that came with your camera. (☞P.169)
Your camera is set to NTSC video format (used in North America and other countries/regions) for use with television equipment and other audiovisual equipment. If the equipment you want to connect to uses PAL format (used in Europe and elsewhere), then switch your camera to PAL format before connecting.
The default setting varies depending on where you purchased the camera.

Available Settings
NTSC
PAL

To change the video format, follow the steps below.

1 **Display the setup menu.**
- For the operating procedure, see P.178.

2 **Press the ▼ button to select [Video Out Mode] and press the ▶ button.**

3 **Press the ▲▼ buttons to select the desired setting.**

4 **Press the MENU/OK button.**

Note ----------
This camera is not compatible with SECAM TV System.

The screen images shown here may differ from the images displayed on your computer depending on your computer OS.

For Windows

Refer to P.225 for Macintosh.

You can download images to a computer using either of the following methods.

- You can use the supplied DL-10 software to collectively download images automatically. To use this method, you must install the software from the supplied CD-ROM.
- You can download images without using the DL-10 software.

Caution----------

You cannot download images from this camera to a computer running Windows 98 or 98 SE.

Note----------

For details on how to download images from the camera to your computer, see the "Software User Guide" available from the supplied CD-ROM. For how to display the "Software User Guide", see P.218.

System Requirements for Using the supplied CD-ROM

The following environments are necessary for using the supplied CD-ROM.
Please check your computer, or the computer's user manual.

Operating Systems Supported	Windows 2000 Professional Service Pack 4 Windows Me Windows XP Home Edition Service Pack 2/Professional Service Pack 2 Windows Vista Service Pack 1
CPU	Windows 2000/Me/XP: Pentium® III 500 MHz or faster Windows Vista: Pentium® III 1 GHz or faster
Memory	Windows 2000/Me/XP: 256 MB or more Windows Vista: 512 MB or more
Hard drive space required for installation	160 MB or more
Display Resolution	1024 × 768 pixels or greater
Display Colors	65,000 colors or greater
CD-ROM Drive	A CD-ROM drive compatible with the above-mentioned computer
USB Port	A USB port compatible with the above-mentioned computer

Caution----------

- The supplied CD-ROM is not supported on 64-bit versions.
- The supplied CD-ROM is not supported on Windows 98/98 SE.
- If your computer has an upgraded OS, the USB function may not work normally, so it cannot be supported.
- The provided software may not operate properly if changes are made to the operating system, such as with patches and service package releases.
- The camera does not support connection to a USB port added by using an extension function (PCI bus or other).
- If used in conjunction with a hub or other USB devices, the software may not work properly.
- When dealing with movies and other large files, a larger memory environment is recommended.

CD-ROM Setup

Once you insert the supplied CD-ROM in the CD-ROM drive, the installer screen appears automatically.

Item Name	Description	Refer to
Installing the software	Use this button to install software required for batch downloading and editing of images.	P.215
Browse User's Manual (Software Version)	Click this to display the "Software User Guide" (PDF).	P.218
Browse CD-ROM Content	Click this to display the list of files contained on the CD-ROM.	P.218

When [Installing the software] is Clicked

The following software will be installed:

Software	Description
DL-10	Downloads images collectively to your computer.
Irodio Photo & Video Studio	Shot images can be displayed, managed, or edited.
USB Driver	Used to connect an earlier model camera to a computer running Windows 98 SE/Me/2000. Not available with this camera.
WIA Driver	Used to connect an earlier model camera to a computer running Windows XP/Vista. Not available with this camera.

Caution----------

- Do not install the software when the camera is connected to your computer with a USB cable.
- If software is already installed from a CD-ROM supplied with a previous model, a message stating that the old software must be uninstalled before installing the new one is displayed.
  Follow the message instructions and uninstall the old software before installing the new software. Functions of the old model can still be used as before.
- For Windows Vista, Windows XP or Windows 2000, administrator privileges are required to install the software.
- DL-10 is not network-compatible. Use as a stand-alone application.

Note----------

The camera is provided with Irodio Photo & Video Studio software that allows you to display and edit images from your computer. For how to use Irodio Photo & Video Studio, see the displayed “Help”.
For the latest information about Irodio Photo & Video Studio, access the Web page of Pixela Co., Ltd. (http://www.pixela.co.jp/oem/irodio/e/irodio_digitalphoto_videostudio/).

Here is an example of the Windows XP screen.

1 **Start your computer and insert the supplied CD-ROM in the CD-ROM drive.**

Operating systems other than Windows Vista

- The installer screen appears automatically.

Windows Vista

- The Autorun screen appears automatically.
- Select [Run Autorun.exe]. The installer screen appears automatically.

2 **Click [Installing the software].**

Operating systems other than Windows Vista

- After a while, the [Choose Setup Language] screen appears.

Windows Vista

- A screen appears to confirm user account management.
- Select [Allow] for the access request to the computer. After a while, the [Choose Setup Language] screen appears.

3 **Confirm the language, and then click [OK].**

- The [Welcome to the InstallShield Wizard for DSC Software] screen appears.

4 **Click [Next].**

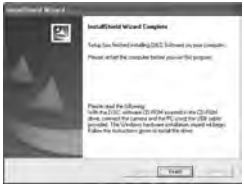
- The [Choose Destination Location] screen appears.

5 Confirm where you want to install and then click [Next].

- The [Select Program Folder] screen appears.

6 Confirm the destination location and then click [Next].

- The Irodio Photo & Video Studio installer starts. Install Irodio Photo & Video Studio following the messages displayed on the screen.
  Depending on your computer, it may take some time until the next screen is displayed.



- When installation of Irodio Photo & Video Studio is completed, a dialog box appears, indicating that all software applications have been installed.

7 Click [Finish].

- A dialog box indicating that installation of DSC Software is complete appears.

8 When a message appears asking you to restart your computer, select [Yes, I want to restart my computer now.] and then click [Finish].

- Restart your computer.
- After restarting your computer, a Windows security warning message appears.

9 Click [Unblock] for DL-10.

Note ----------

You can remove (uninstall) the software. (☞P.219)

When [Browse User's Manual (Software Version)] is Clicked

The "Software User Guide" (PDF file) on the CD-ROM is displayed on your computer screen.
If you have Acrobat Reader installed on your computer, simply click [Browse User's Manual (Software Version)]. Acrobat Reader must be installed to view the PDF file.

When [Browse CD-ROM Content] is Clicked

You can check folders and files on the CD-ROM. The CD-ROM contains not only the software installed by clicking [Installing the software] but also Acrobat Reader software.
Acrobat Reader is required to display the operation manual (PDF file).
If the computer is running under Windows, Acrobat Reader can be installed. Acrobat Reader need not be installed if already installed on your computer.

Caution----------

- Do not install the software when the camera is connected to your computer with a USB cable.
- For Windows Vista, Windows XP or Windows 2000, administrator privileges are required to install the software
- A warning message may appear if you use the Acrobat Reader included in the CD-ROM with Windows Vista. If a warning message appears, please download the latest version from the Adobe Systems website.

Note----------

- For details about Acrobat Reader, see Help for Acrobat Reader.
- To install Irodio Photo & Video Studio alone, double-click "Irodio Photo & Video Studio.exe" in the Irodio Photo & Video Studio folder.

1 **Start your computer, and insert the supplied CD-ROM into the CD-ROM drive.**

Operating systems other than Windows Vista

- The installer screen appears automatically.

Windows Vista

- The Autorun screen appears automatically.
- Select [Run Autorun.exe]. The installer screen appears automatically.

2 **Click [Browse CD-ROM Content].**

- The files on the CD-ROM are listed.

3 **Double-click the [Acrobat] folder.**

4 **Double-click the [English] folder.**

5 **Double-click [ar500enu] (ar500enu.exe).**

- A screen appears to confirm user account management for Windows Vista. Select [Continue].

6 **Install Acrobat Reader by following the messages displayed.**

Uninstalling the Software

Caution----------

- For Windows Vista, Windows 2000/XP, administrator privileges are required to uninstall the software.
- If any other program is active or unsaved data remains, save the data and terminate the program before uninstalling.

DSC Software

1. **Click [Start] on the Windows task bar.**
2. **Select [Settings]-[Control Panel] ([Control Panel] for XP/Vista).**
3. **Double-click the [Add/Remove Programs] icon (or the [Add or Remove Programs] icon in Windows XP).**
4. **Select [DSC Software] (select [DSC Software S]) and then click the [Change/Remove] button.**
5. **Confirm file deletion and click [OK].**
   - The [Shared File Detected] dialog box appears.
6. **Select the [Don't display this message again.] check box, and then click [Yes].**
   - The uninstallation process begins. When it is finished, close the displayed window.

Irodio Photo & Video Studio

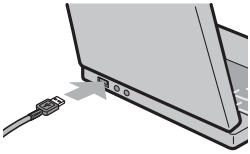
1. **Click [Start] on the Windows task bar.**
2. **Select [Settings]-[Control Panel] ([Control Panel] for XP/Vista).**
3. **Double-click the [Add/Remove Programs] icon (or the [Add or Remove Programs] icon in Windows XP).**
4. **Select [Irodio Photo & Video Studio] and then click [Change/Remove].**
5. **Confirm file deletion and click [OK].**
   - The uninstallation process begins. When it is finished, close the displayed window.
6. **Restart your computer.**

Downloading Images Using the Software

After installing the software on your computer, connect your camera to the computer.

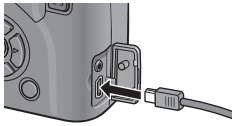
1 **Make sure the camera power is off.**

2 **Connect the USB cable to the USB port of your computer.**



3 **Connect the USB cable to the USB terminal of your camera.**

- Your camera turns on and the computer automatically reads the necessary files.



4 **DL-10 starts and image transfer begins automatically.**

5 **When image transfer is completed, disconnect the camera and the computer. (☞P.224)**

Note ----------

- For how to use DL-10, refer to the "Software User Guide" (PDF file) contained in the provided CD-ROM. (☞P.218)
- If image transfer does not begin, re-start your computer and perform Steps 1 to 5 again.

Caution ----------

- Do not force the USB cable into the terminal.
- Do not apply excessive force with the USB cable connected.
- When using the USB cable, do not move the camera with the USB cable.

Downloading Images Without Using the Software

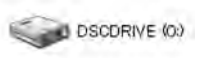
You can download images from the camera to a computer without having to use software.

1 **Make sure that the camera power is off.**

2 **Connect the accessory USB cable to a USB port of your computer.**

3 **Connect the USB cable to the USB terminal of your camera.**

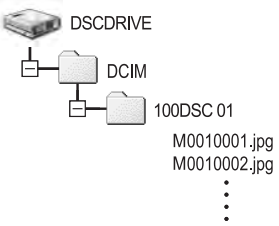
- Your camera turns on.
- Your computer automatically reads a file necessary for recognizing the camera as a drive.
- After this preparation, the camera is displayed as a drive under [My Computer].



Example of the display in Windows XP

4 **From the displayed drive, copy a file to the desired location.**

- The figure at right shows the folder configuration in the drive.
- When the contents of the internal memory are displayed, the drive name is [DSCINDRV].



Example of the display in Windows XP

Caution----------

- Do not turn off the camera or disconnect the USB cable during image transfer.
- If a file with the same name already exists at the destination, it is overwritten. If you do not want the file to be overwritten, transfer data to another folder, or change the file name of the file at the destination.

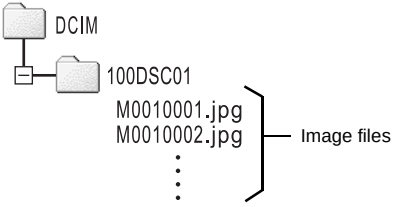
Note----------

When an SD memory card is loaded, its files are displayed. Otherwise, files in the internal memory are displayed.

Downloading Images from an SD Memory Card----------

It is possible to download images from an SD memory card to the computer via a PC card slot or card reader. Depending on the type of PC card slot or card reader, a memory card adapter may be required when using an SD memory card. If the SD memory card can be used in the PC card slot, no memory card adapter is required.

- Images are stored in an SD memory card in the hierarchy shown below.



Example of the display in Windows XP

Card Reader

This is a device connected to a computer to read the contents of cards. In addition to the memory card adapter-type, there are card readers compatible with various types of cards, into which you can directly load an SD memory card.
Use a card reader that is compatible with your computer's operating system and the size of the SD memory card.

Caution----------

If you connect the camera or a card reader to a computer and then directly display, edit or save SD memory card images on the computer, you may no longer be able to play back the images on the camera. Download the images to the computer before displaying, editing or saving them.

Disconnecting the Camera from Your Computer

Perform the following operations when disconnecting the camera from your computer. (The display is an example of Windows XP. The terms are different for other operating systems but the operations are the same.)

1 **Double-click the [Safely Remove Hardware] icon at the right end of the task bar.**

2 **Select [USB Mass Storage Device] and click [Stop].**

3 **Check that [USB Mass Storage Device] is selected and click [OK].**

4 **Click [Close].**

5 **Disconnect the USB cable.**

Note ----------

- If the USB cable is disconnected without disabling the connection, the Unsafe Removal of Device screen may be displayed. Be sure to stop the connection before removing the USB cable.
- Do not disconnect the USB cable during image downloading. Make sure that downloading has completed, disable the connection, and then disconnect the cable.

For Macintosh

Refer to P.212 for Windows.

This camera supports the following Macintosh operating systems.
- Mac OS 9.0 to 9.2.2
- Mac OS X 10.1.2 to 10.5.2

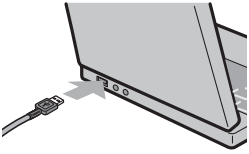
Caution----------

- You cannot download images from this camera to a Macintosh running Mac OS 8.6.
- Although the software included in the CD-ROM cannot be used with Macintosh, it is possible to display the Software User Guide. (Only on computers with Acrobat installed.)

Downloading Images to Your Computer

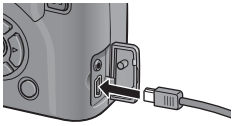
1 **Make sure that the camera power is off.**

2 **Connect the accessory USB cable to a USB port of your computer.**



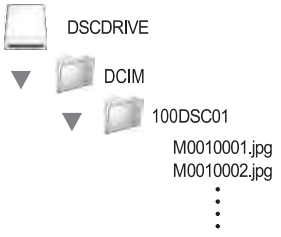
3 **Connect the USB cable to the USB terminal of your camera.**

- Your camera turns on.
- Your computer automatically reads the file necessary for recognizing the camera as a drive.
- After this preparation, the camera is displayed as a drive on the Desktop.



4 **From the displayed drive, copy a file to the desired location.**

- The figure below shows the folder configuration in the drive.
- When the contents of the internal memory are displayed, the drive name is [DSCINDRV].



Caution----------

- Do not force the USB cable into the terminal.
- Do not apply excessive force with the USB cable connected.
- When using the USB cable, do not move the camera with the USB cable.

Disconnecting the Camera from Your Computer

1 **Drag and drop the displayed drive or the volume icon to the "Trash".**

- If a screen appears prompting you to enter the administrator's password, enter the password.

2 **Disconnect the USB cable.**

Note----------

- You can also click [Eject] on the [Special] menu in Mac OS 9 or the [File] menu in Mac OS X to cancel the connection.
- If the USB cable is disconnected without disabling the connection, the Unsafe Removal of Device screen may be displayed. Be sure to stop the connection before removing the USB cable.
- Do not disconnect the USB cable during image downloading. Make sure that downloading has completed, disable the connection, and then disconnect the cable.
- When you connect your camera to a Macintosh computer, a file called "Finder .DAT/ DS_Store" may be created in your SD memory card, which will appear as [Unmatched File] on your camera. You can delete this file from the SD memory card if you wish.

Troubleshooting

Error Messages

If an error message is displayed on the screen, take the corresponding action.

Error Message	Cause and Action	Refer to
Insert Card	No card is loaded. Insert a card.	P.30
Set Date.	The date is not set. Set the date.	P.209
File Number Over Limit	The file number limit has been exceeded. Use another card.	P.207 P.208
Unmatched File	The camera cannot display this file. Check the file contents on your computer, and then delete the file.	-
Insufficient Memory. Continue?	Because there is not sufficient capacity on the card, all the files cannot be copied. Use another card.	P.28
Protected	You are trying to delete a protected file.	P.152
Card Is Write- Protected.	The card is locked (write-protected). Unlock the card.	P.29
Print settings cannot be set for this file.	Print settings cannot be set for this file (movie, etc.).	-
Insufficient Memory/ Capacity short	Files cannot be stored. Make sure there is enough free space or delete unwanted files.	P.53 P.180 P.181
	The image print number limit has been exceeded. Select an image and set the number to 0.	P.175
Format internal memory	You must format the internal memory.	P.181
Format card	The card is not formatted. Format the card with this camera.	P.180
Card Error	Reformat the card. If, after doing so, the error message still appears, the card may be faulty. Do not use the card.	P.180
Writing Data	Writing file to memory. Wait until writing finishes.	-
No File	There are no files that can be played back.	-
Cannot Record	The storage capacity is 0. Switch to another card or the internal memory.	P.28

Camera Troubleshooting

Power Supply

Problem	Cause	Solution	Refer to
The camera does not turn on.	Battery is not loaded or is exhausted.	Load the battery correctly. When using the dedicated rechargeable lithium-ion battery or AAA nickel-metal hydride batteries, charge the batteries as required. When using AAA alkaline batteries or AAA oxyride batteries, replace them with new batteries. Use the AC adapter as required.	P.30 P.26 P.241
	A (manganese dry cell or other) unacceptable battery is used.	Use the dedicated rechargeable lithium-ion battery or specified commercially-available batteries. Never use any other batteries.	P.26
	The AC adapter is not connected correctly.	Reconnect it properly.	P.241
	The camera is automatically turned off by auto power off.	Turn the camera back on.	P.32
	The battery is loaded in wrong direction.	Load correctly.	P.30
The camera turns off during use.	The camera was left unattended and unused, so auto power off turned it off.	Turn the camera back on.	P.32
	Battery is exhausted.	When using the dedicated rechargeable lithium-ion battery or AAA nickel-metal hydride batteries, charge the batteries as required. When using AAA alkaline batteries or AAA oxyride batteries, replace them with new batteries. Use the AC adapter as required.	P.26 P.241
	A unacceptable battery is used.	Use the dedicated rechargeable lithium-ion battery or specified commercially-available batteries. Never use any other batteries.	P.26
The camera does not turn off.	Camera malfunction.	Remove the battery and load it again. Reconnect the AC adapter cable properly, if using.	P.30 P.241
The battery has adequate remaining power, but: • The battery symbol is displayed, indicating a low battery level. • The camera turns off.	A unacceptable battery is used.	Use the dedicated rechargeable lithium-ion battery or specified commercially-available batteries. Never use any other batteries.	P.26

Problem	Cause	Solution	Refer to
Cannot charge the rechargeable lithium-ion battery.	Rechargeable lithium-ion battery has reached the end of its useful life.	Replace with a new rechargeable lithium-ion battery.	P.30
Battery runs out quickly.	It is being used at extreme high or low temperatures.	-	-
	Many shots are being taken in dark places or other location requiring extensive use of flash.	-	-

Shooting

Problem	Cause	Solution	Refer to
The camera does not shoot even if you press the shutter release button.	Battery is exhausted.	When using the dedicated rechargeable lithium-ion battery or AAA nickel-metal hydride batteries, charge the batteries as required. When using AAA alkaline batteries or AAA oxyride batteries, replace them with new batteries.	P.26 P.241
	The camera is not on.	Press the POWER button to turn the camera on.	P.32
	The camera is in playback mode.	Press the ▶ (Playback) button to select the shooting mode.	P.48
	The shutter release button is not pressed all the way.	Press the shutter release button all the way.	P.38
	The SD memory card is not formatted.	Format the card.	P.180
	The SD memory card is full.	Load a new card, or delete unwanted files.	P.53 P.30
	The SD memory card has reached the end of its useful life.	Load a new SD memory card.	P.30
	The flash is charging.	Wait until the Auto Focus/Flash lamp stops blinking.	P.44
	The SD memory card is locked.	Unlock the card.	P.29
	The contact surface of the SD memory card is dirty.	Wipe with a soft, dry cloth.	-
Unable to view the shot image.	The image confirmation time is too short.	Lengthen the image confirmation time.	P.202
Images do not appear on the picture display.	The camera is not on or the picture display is dark.	Turn the camera on or adjust the brightness of the picture display.	P.32 P.182
	The picture display is off.	Press the VF/LCD button to turn the picture display on.	P.57
	Display has been switched to the LCD viewfinder (VF-1).	Press the VF/LCD button to switch to the picture display.	P.18
	The VIDEO/AV cable is connected.	Disconnect the VIDEO/AV cable.	P.169

Problem	Cause	Solution	Refer to
Nothing displays in the LCD viewfinder (VF-1).	The LCD viewfinder is not fully attached.	Fully attach the LCD viewfinder.	-
Although the camera is set to auto focus, it is unable to focus.	The lens is dirty.	Wipe clean with a soft, dry cloth.	-
	The subject is not in the center of the shooting range.	Shoot with focus lock.	P.38
	It is a hard-to-focus subject.	Shoot with focus lock or manual focus.	P.38 P.103
Although the camera is not in focus, the green frame appears in the center of the picture display.	The camera incorrectly focused because the distance to the subject is too close.	Shoot with macro mode or move a little away from the subject.	P.42
The picture is blurred. (The symbol appears.)	You moved the camera when pressing the shutter release button.	Hold the camera with your elbows pressed against your body. Use a tripod. Use the camera shake correction function.	P.36 P.131
	When shooting in a dark place (such as indoors), the shutter speed slows down and pictures become easily blurred.	Use the flash. Use the camera shake correction function. Raise the ISO setting.	P.44 P.131 P.140
Vignetting (condition where the four corners appear dark) occurs around the edges.	Even with the tele conversion lens (TC-1) attached, the zoom position is not set to the telephoto side.	Operate the zoom lever to set the zoom position to the telephoto side.	-
The flash does not fire or the flash cannot charge.	The flash is not open.	Slide the ϟ (Flash) OPEN switch outward to open the flash.	P.44
	The flash cover is not fully raised.	Do not press or cover the flash cover. Also, return the LCD viewfinder (VF-1) to the original angle, and adjust to open the flash.	P.44
	The flash cannot be used in the following cases: • When auto bracket, white balance bracket, or color bracket is set • In multi-shot mode • When [Movie] or [Landscape] is set in scene mode	To shoot with the flash, change the settings or mode.	P.44 P.121 P.122 P.124 P.106 P.88 P.145
	The flash is set to flash off.	Open the flash. Use the ϟ (Flash) button to cancel flash off.	P.44
	Battery is exhausted.	When using the dedicated rechargeable lithium-ion battery or AAA nickel-metal hydride batteries, charge the batteries as required. When using AAA alkaline batteries or AAA oxyride batteries, replace them with new batteries. Use the AC adapter as required.	P.26 P.241

Problem	Cause	Solution	Refer to
Even though the flash fired, the picture is dark.	The distance to the subject exceeds the flash range.	Get closer to your subject and shoot. Change the flash mode or the ISO setting.	P.44 P.140
	The subject is dark.	Correct the exposure. (Exposure compensation also changes the light intensity of the flash.)	P.132
	The light intensity of the flash is not appropriate.	Adjust the light intensity of the flash.	P.118 P.119
	The flash cover is not fully raised.	Do not press or cover the flash cover. Also, return the LCD viewfinder (VF-1) to the original angle, and adjust to open the flash.	P.44
The image is too bright.	The light intensity of the flash is not appropriate.	Adjust the light intensity of the flash. Alternatively, move a little away from the subject or illuminate the subject with another light source instead of using the flash.	P.118 P.119
	Subject is overexposed. (The [!AE] symbol appears.)	Correct the exposure. Decrease the exposure time. Increase the aperture value (close the aperture). Set [Auto Aper. Shift] to [On].	P.132 P.83 P.81 P.143
	The brightness of the picture display is not appropriate.	Adjust the brightness of the picture display.	P.182
The image is too dark.	The shot was taken in a dark place while set to flash off.	Open the flash. Use the ϟ (Flash) button to cancel flash off.	P.44
	The subject is underexposed.	Correct the exposure. Increase the exposure time.	P.132 P.83
	The brightness of the picture display is not appropriate.	Adjust the brightness of the picture display.	P.182
The image lacks natural color.	The picture was shot in conditions that made it difficult for auto white balance to adjust the white balance.	Add a white object to the composition or use a white balance mode other than [AUTO].	P.134
The date or recording information does not appear on the screen.	Display is set to no symbol display.	Press the DISP. button to change the display.	P.57
The brightness of the picture display changes during AF.	You are using AF in a dark place or when the auto focus range and surrounding brightness are different.	This is normal.	-
There is a vertical smear on the image.	This is a phenomenon that occurs when a bright subject is shot. It is called the smear phenomenon.	This is normal.	-

Problem	Cause	Solution	Refer to
The level indicator is not displayed.	[Level Setting] is set to [Off] or [Sound].	Set [Level Setting] to [Display] or [Disp + Snd].	P.196
	The display is set to a setting other than normal symbol display or histogram.	Press the DISP. button to change the display to normal symbol display or histogram.	P.57
	The camera is upside down (shutter release button is on the bottom).	Hold the camera correctly.	-
The image is tilted even though it was shot with the level indicator in the middle or while the level sound was sounding.	You shot the image while moving, such as on a amusement ride.	Shoot in an environment that is not moving.	-
	The subject is not level.	Check the subject.	-

Playback/Deleting

Problem	Cause	Solution	Refer to
Cannot play back, or the playback screen does not appear.	The camera is not in playback mode.	Press the ▶ (Playback) button.	P.48
	The VIDEO/AV cable is not connected properly.	Reconnect it properly.	P.169
	The [Video Out Mode] setting is incorrect.	Set it to the correct format.	P.211
	The playback screen displays in the LCD viewfinder (VF-1).	Set [Playback Screen] to [LCD].	P.201
The contents of the SD memory card cannot be played back, or the playback screen does not appear.	No SD memory card is loaded, or an SD memory card with no stored images is loaded.	Load a card with stored images.	P.30
	You played back an SD memory card that was not formatted with this device.	Load a card that was formatted and recorded with this device.	P.180
	You played back an SD memory card that was not recorded normally.	Load a normally recorded card.	-
	The contact surface of the SD memory card is dirty.	Wipe with a soft, dry cloth.	-
	There is something wrong with the SD memory card.	Play back images from another card and if there is nothing wrong with the card, the camera is okay. There may be something wrong with the card, so do not use it.	-

Problem	Cause	Solution	Refer to
The picture display turned off.	Battery is exhausted.	When using the dedicated rechargeable lithium-ion battery or AAA nickel-metal hydride batteries, charge the batteries as required. When using AAA alkaline batteries or AAA oxyride batteries, replace them with new batteries. Use the AC adapter as required.	P.26 P.241
	The camera was left unattended and unused, so auto power off turned it off.	Turn the camera back on.	P.32
Part of the screen flashes in black.	The screen is highlighted due to an overly bright area.	It is recommended that you shoot another image while avoiding direct sunlight and setting the exposure level lower (-).	P.59 P.132
A file cannot be deleted.	The file is protected.	Unprotect the file.	P.153
	The SD memory card is locked.	Unlock the card.	P.29
Cannot format the SD memory card.	The SD memory card is locked.	Unlock the card.	P.29

Other Problems

Problem	Cause	Solution	Refer to
Cannot load the SD memory card.	The card is facing the wrong way.	Load correctly.	P.30
The camera does not operate even when the buttons are pressed.	Battery is exhausted.	When using the dedicated rechargeable lithium-ion battery or AAA nickel-metal hydride batteries, charge the batteries as required. When using AAA alkaline batteries or AAA oxyride batteries, replace them with new batteries. Use the AC adapter as required.	P.26 P.241
	Camera malfunction.	Press the POWER button to turn the camera off, and then press the POWER button to turn the camera on again.	P.32
		Remove the battery and load it again. Reconnect the AC adapter cable properly, if using.	P.30 P.241
The date is incorrect.	The correct date/time are not set.	Set the correct date/time.	P.209
The set date disappeared.	The battery was removed.	If the battery is removed for more than one week, the date setting will be lost. Make the settings again.	P.209
Auto power off does not work.	Auto power off is set to [Off].	Set the time for auto power off.	P.200
The beep sound cannot be heard.	The beep sound volume is turned off.	Use [Vol. Settings] to set the volume to a setting other than mute.	P.193
Images do not appear on the TV.	The [Video Out Mode] setting is incorrect.	Set it to the correct format.	P.211
	The AV cable is not connected.	Connect the AV cable properly.	P.169
	The TV is not correctly set to VIDEO IN.	Check that the TV is correctly set to VIDEO IN.	-

Software and Computer Troubleshooting

For details about the software, refer to the “Software User Guide” (PDF file).

Warning Messages Under Windows XP Service Pack 2 and Windows Vista

When software for your digital camera is used on a computer with Windows XP Service Pack 2 or Windows Vista installed, the following warning message may appear at software activation or USB connection.
With this in mind, refer to the following:

The screenshots are examples when using Windows XP.

When this warning message is displayed:

1 **Check the information provided on the message screen to make sure that it comes from a reputable source, and then click [Unblock].**

Caution----------

If you do not recognize the program, you should block it because it may be a virus. Click [Keep Blocking] to prevent the program from connecting to the Internet.

If you clicked [Keep Blocking]:

Follow the steps below to check the Windows Firewall settings.

1 **Click [Start] and then [Control Panel].**

2 **Double-click [Windows Firewall].**

- If [Windows Firewall] is not displayed, click [Switch to Classic View] at the top left of the window.

3 **Click the [Exceptions] tab.**

4 **Check that the software is in [Programs and Services].**

5 **Click [Add Program] to add software that uses the network.**

If you clicked [Ask Me Later]:

Each time the program is activated, the [Windows Security Alert] dialog box appears. Then you can select [Unblock].

Specifications

Image Sensor		Approx. 12.1 million effective pixels (Approx. 12.4 million total pixels), 1/1.7" CCD
Lens	Focal Length	5.1 to 15.3 mm (equivalent to 24 to 72 mm on a 35-mm camera)
	F-aperture	F2.5 to F4.4
	Shooting Distance	Normal shooting: approx. 30 cm to ∞ (Wide-angle) or 30 m to ∞ (Telephoto) (from the front of the lens)
		Macro shooting: approx. 1 cm to ∞ (Wide-angle), 4 cm to ∞ (Telephoto) or 1 cm to ∞ (Zoom macro mode) (from the front of the lens)
	Lens Construction	11 elements in 7 groups
Zoom Magnification		Optical zoom at 3.0×, Digital zoom at 4.0×, Auto resize zoom at approx. 6.3× (VGA image)
Focus Modes		Multi AF (CCD method)/Spot AF (CCD method)/MF/Snap/∞ (with Focus Lock, AF Aux. Light)
Shutter Speed	Still Image	180, 120, 60, 30, 15, 8, 4, 2, 1 to 1/2000 seconds (The upper and lower limits differ for each shooting mode and flash mode.)
	Movie	1/30 to 1/2000 seconds
Exposure Control	Exposure Metering Mode	Multi Light Metering (256 segments)/Center-weighted Light Metering/ Spot Metering (TTL-CCD Metering, AE Lock available)
	Exposure Mode	Program AE, Aperture Priority AE, Manual Exposure
	Exposure Compensation	Manual exposure compensation (+2.0 to –2.0EV in 1/3EV Steps), Auto bracket function (–0.5 EV, ±0, +0.5 EV/ –0.3 EV, ±0, +0.3 EV)
ISO Sensitivity (Standard Output Sensitivity)		Auto/Auto-Hi/ISO 64/ISO 100/ISO 200/ISO 400/ISO 800/ISO 1600
White Balance Mode		Auto/Outdoors/Cloudy/Incandescent Lamp/Fluorescent Lamp/Manual Settings/Detail, White balance bracket function
Flash	Flash Mode	Auto (during low light and when subject is backlight)/Red-eye Flash/ Flash On/Flash Synchro./Manual Flash (Full, 1/1.4, 1/2, 1/2.8, 1/4, 1/5.6, 1/8, 1/11, 1/16, 1/22, 1/32)/Flash Off
	Built-in flash Range	Approx. 20 cm to 5.0 m (Wide-angle), approx. 15 cm to 3.0 m (Telephoto) (ISO Auto, ISO 400)
	Flash Compensation	±2.0EV (1/3 EV Steps)
Picture Display		2.7" Transparent Amorphous Silicon TFT LCD, approx. 460,000 dots
Shooting Mode		Auto shooting mode/Program shift mode/Aperture priority mode/Manual exposure mode/Scene mode (Movie/Portrait/SEA&SEA/Landscape/ Nightscape/Zoom Macro/Skew Correct Mode/Text Mode)/My Settings Mode
Picture Quality Mode[*1]		F (Fine), N (Normal), RAW (DNG file format)[*2]

Number of Recorded Pixels	Still Image	4000 × 3000, 3984 × 2656, 2992 × 2992, 3264 × 2448, 2592 × 1944, 2048 × 1536, 1280 × 960, 640 × 480
	Movie	640 × 480, 320 × 240
	Text	4000 × 3000, 2048 × 1536
Recording Media		SD memory card, SDHC memory card (up to 16 GB), Internal Memory (approx. 54 MB)
Recording Data Capacity	4000 × 3000	N: approx. 2496 KB/Screen, F: approx. 4341 KB/Screen, RAW: approx. 17.7 MB/Screen
	3984 × 2656	N: approx. 2205 KB/Screen, F: approx. 3832 KB/Screen, RAW: approx. 15.7 MB/Screen
	2992 × 2992	N: approx. 1871 KB/Screen, F: approx. 3247 KB/Screen, RAW: approx. 13.0 MB/Screen
	3264 × 2448	N: approx. 1637 KB/Screen
	2592 × 1944	N: approx. 1068 KB/Screen
	2048 × 1536	N: approx. 680 KB/Screen
	1280 × 960	N: approx. 365 KB/Screen
	640 × 480	N: approx. 95 KB/Screen
Recording File Format	Still Image	JPEG (Exif Ver. 2.21)[*3], RAW (DNG)
	Movie	AVI (Open DML Motion JPEG Format Compliant)
	Compression Format	JPEG Baseline Format Compliant (Still image, movie)
Other Major Shooting Functions		Cont/S-Cont/M-Cont, Self-timer (operation time: approx. 10 seconds, approx. 2 seconds), Interval shooting (shooting interval: 5 seconds to 3 hours, in increments of 5 seconds)[*4], Color bracket, B&W (TE), Noise reduction, Histogram, Grid guide, Electronic level, Hot shoe
Other Major Playback Functions		Auto Rotate, Grid view, Enlarged view (maximum 16×), Resize
Interface		USB2.0 (High-Speed USB) Mini-B, Mass storage[*5], audio output 1.0Vp-p (75 Ω)
Video Signal Format		NTSC, PAL
Power Supply		Rechargeable Lithium-ion Battery (Optional) (3.7 V)
		AAA Dry Alkaline Battery × 2, AAA Nickel-metal hydride Battery × 2, AAA Oxyride Battery × 2
		AC adapter (Optional): 3.8 V
Battery Consumption[*6]		Usage time of rechargeable lithium-ion battery: approx. 350 pictures; Usage time of AAA alkaline batteries: approx. 45 pictures[*7] (based on CIPA standard)
Dimensions		111.6 mm (W) × 58.0 mm (H) × 25.0 mm (D) (excluding projecting parts)
Weight		Camera: approx. 208 g (excluding battery, SD memory card, and strap)
Tripod Hole Shape		1/4-20UNC
Date Maintain Time		Approx. 1 week
Operating Temperature		0°C to 40°C
Operating Humidity		85% or less
Storage Temperature		-20°C to 60°C

*1 The picture quality mode that can be set varies depending on the image size.
*2 A JPEG file in Normal 640 or in Fine/Normal mode with the same size as the RAW file is recorded at the same time. The DNG file format is a RAW image file format and is the standard format of Adobe Systems.
*3 Compatible with DCF and DPOF. DCF is the abbreviation for "Design rule for Camera File system," a JEITA standard. (Fully compatibility with other devices is not guaranteed.)
*4 When the flash is set to [Flash Off].
*5 Mass storage mode is supported by Windows Me, 2000, XP, Vista, Mac OS 9.0 - 9.2.2, and Mac OS X 10.1.2 - 10.5.2.
*6 The number of remaining shots is based on the CIPA standard and may vary depending on usage conditions. This is for reference only.
*7 Use of Panasonic AAA alkaline batteries.

Number of Images That Can be Stored in Internal Memory/SD Memory Card

The following table shows the approximate number of images that can be recorded in the internal memory and onto an SD memory card at various image size and picture quality settings.

Mode	Pic Quality/ Size	Internal Memory	512 MB	1 GB	2 GB	4 GB	8 GB	16 GB
Still Image	RAW(12M)	2	22	43	88	172	353	721
	F4000(12M)	11	107	207	421	826	1689	3448
	N4000(12M)	20	187	359	731	1436	2936	5992
	RAW3:2(10M)	2	25	49	99	195	400	817
	F3:2(10M)	13	121	234	476	935	1912	3902
	N3:2(10M)	23	210	405	819	1609	3289	6712
	RAW1:1(9M)	3	30	57	117	231	472	964
	F1:1(9M)	15	143	276	558	1097	2242	4576
	N1:1(9M)	27	249	479	975	1915	3915	7990
	N3264(8M)	30	278	534	1078	2117	4327	8831
	N2592(5M)	48	436	839	1707	3352	6852	13983
	N2048(3M)	74	682	1313	2671	5247	10724	21885
	N1280(1M)	133	1208	2323	4726	9282	18973	38718
	N640(VGA)	497	4488	8632	15359	30159	61643	125793
Text Mode	4000 × 3000	20	187	359	731	1436	2936	5992
	2048 × 1536	74	682	1313	2671	5247	10724	21885
Movie	640 × 480 15Frame/S	1 Min. 22 Sec.	12 Min. 19 Sec.	24 Min. 2 Sec.	48 Min. 13 Sec.	94 Min. 40 Sec.	193 Min. 30 Sec.	394 Min. 53 Sec.
	640 × 480 30Frame/S	41 Sec.	6 Min. 14 Sec.	11 Min. 59 Sec.	24 Min. 23 Sec.	47 Min. 54 Sec.	97 Min. 55 Sec.	199 Min. 49 Sec.
	320 × 240 15Frame/S	2 Min. 40 Sec.	24 Min. 5 Sec.	46 Min. 19 Sec.	94 Min. 11 Sec.	184 Min. 57 Sec.	378 Min. 2 Sec.	771 Min. 25 Sec.
	320 × 240 30Frame/S	1 Min. 22 Sec.	12 Min. 19 Sec.	24 Min. 2 Sec.	48 Min. 13 Sec.	94 Min. 40 Sec.	193 Min. 30 Sec.	394 Min. 53 Sec.

Note

- The maximum recording time is the estimated total recording time. The maximum recording time per shooting is 90 minutes or the equivalent of 4 GB.
- The number of remaining shots displayed on the picture display may differ from the actual number of shots, depending on the subject.
- Movie recording time and the storage capacity of still pictures may vary depending on the recording destination (internal memory or SD memory card), shooting conditions, and the type and manufacturer of the SD memory card.
- A high speed memory card is recommended when shooting for long periods.

Optional Accessories

This camera can be used with the items (sold separately) listed below.

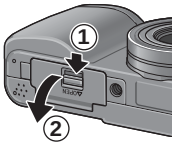
Item	Remarks
AC Adapter	Used for power supply from a household outlet to the camera.
Rechargeable Lithium-ion Battery	Rechargeable battery for use with this camera.
Battery Charger	Used to charge the rechargeable lithium-ion battery.

- Before using an optional accessory, see the documentation that came with the product.

Using the AC Adapter (sold separately)

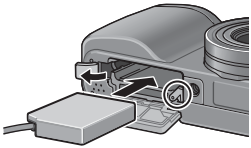
When shooting or viewing still images for a long time, or when connecting to your computer, use of the AC adapter (sold separately) is recommended.
If you have already used this camera, make sure it is turned off before loading the AC adapter.

1 **Slide the release lever toward "OPEN" to open the battery/ card cover.**



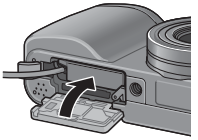
2 **Insert the AC adapter.**

- When the AC adapter is loaded in place, it is locked with the hook shown in the figure.



3 **Open the power (DC input) cable cover and place the cable outside.**

4 **Close the battery/card cover and slide the release lever in the opposite direction of "OPEN" to lock it in place.**



5 **Plug the power cord into an outlet.**

Caution----------

- When closing the battery/card cover, slide the release lever and be sure to lock it in place.
- Be sure to attach the AC cable and plug the power cord into the outlet firmly.
- When you are not using the camera, unplug the AC adapter from the camera and the power outlet.
- If you disconnect the AC adapter from the camera or the plug from the outlet while the camera is in use, data may be lost.
- If you are using the AC adapter, [ ] may appear. This does not indicate a malfunction and you can continue to use the camera.
- When using the AC adapter, do not carry the camera by the cable of the AC adapter.

Disconnecting the AC Adapter

Make sure the camera is turned off before disconnecting the AC adapter.

1 **Unplug the power plug from the outlet.**

2 **Slide the release lever toward "OPEN" to open the battery/card cover.**

3 **Remove the AC adapter from the camera.**

4 **Close the battery/card cover and slide the release lever in the opposite direction of "OPEN" to lock it in place.**

Recommended Ricoh Accessories

The camera can be used with the following recommended accessories when it is used alone.

Caution----------

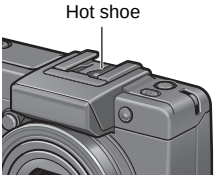
These recommended accessories cannot be used with DX-2G.

Item	Model	Remarks
Self Retaining Lens Cap	LC-1	Opens and closes automatically according to the lens movement.
Wide Conversion Lens	DW-6	A wide conversion lens that enables wide-angle shooting at a lens magnification of 0.79× (equivalent to a 19-mm wide-angle lens on a 35-mm camera). Use with the hood & adapter.
Tele Conversion Lens	TC-1	1.88× tele conversion lens. Use when you want to shoot with a long distance range equivalent to 135-mm on a 35-mm camera. Use with the hood & adapter (case included).
Hood & Adapter	HA-2	Includes a hood to protect the lens from sunlight and an adapter for ϕ43-mm general-use filters. These can be used to enhance the shooting quality when the subject is backlit.
LCD Viewfinder	VF-1	An electrical viewfinder that attaches to the hot shoe. This offers viewfinder coverage of 100% and can be adjusted up to 90° without any parallax, and enables easy low-angle shooting.
Cable Switch	CA-1	A switch that connects to the camera's USB terminal to operate the shutter.

- Before using a recommended accessory, see the documentation that came with the product.
- You cannot use the internal flash when using the wide conversion lens (DW-6), tele conversion lens (TC-1), and hood (HA-2).
- You cannot use the internal flash when the LCD viewfinder (VF-1) is tilted.
- With the tele conversion lens (TC-1) attached, shooting without using the telephoto side can result in vignetting (condition where the four corners appear dark).

Using the External Flash

The camera has a hot shoe, allowing you to attach an external flash (available in stores).



1 **Close the flash cover (☞P.17).**

2 **With the camera and external flash powered off, attach the external flash to the hot shoe.**

3 **Turn on the camera, turn the mode dial to A or M, and set the aperture value (☞P.81, 83).**

4 **Set the ISO sensitivity to a value other than [Auto] (☞P.140).**

5 **Turn on the external flash, turn its mode to Auto, and set the aperture value and ISO sensitivity to the same values on the camera.**

- Be sure to turn off the external flash before detaching the external flash from the camera.

Caution----------

- Camera shake may occur when using slower shutter speeds.
- When using a commercially-available external flash, make sure the flash has the following specifications.
  - It must not have a signal terminal other than an X contact.
  - The polarity of the X contact must be positive (+).
  - The voltage of the X contact must not exceed 20V.
- You cannot use the internal flash when an external flash is attached as this can cause injury or damage.
- You cannot use the LCD viewfinder (VF-1) when an external flash is attached.
- Irrespective of flash setting, a flash ON signal is output to the X contact of the hot shoe. To stop an external flash, use a switch on the flash.
- Exposure may not be appropriate even when the aperture value and ISO sensitivity of the external flash are the same as those of the camera. If so, change the aperture value and ISO sensitivity of the flash.
- Use an external flash with a lighting angle that covers the angle of view of the shooting lens.
- Use an external flash basically at a distance where the internal flash is not adequate (long distance). Shooting at a short distance with an external flash may result in over-exposure of the subject.

Defaults Settings/Functions Whose Defaults are Restored When Camera is Turned Off

Turning the camera off resets some function settings to their defaults.
The table below indicates whether or not the function is reset to its default when the camera is turned off.

O : setting is saved × : setting is reset

Type	Function		Default Settings
Shooting options	Pic Quality/Size	O	N4000(12M)
	Focus	O	Multi AF
	Exposure Metering	O	Multi
	Continuous Mode	×	Off
	Image Settings	O	Normal
	Distortion Corr.	O	Off
	Flash Expo.Comp.	O	0.0
	Man. Flash Amount	O	1/2
	Synchro Settings	O	1stCurtain
	Auto Bracket	O	Off
	Noise Reduction	O	Off
	Interval	×	0 Sec.
	Date Imprint	O	Off
	Camera Shake Corr	O	On
	Exposure Comp.	O	0.0
	White Balance	O	Auto
	White Balance Compensation	O	A: 0, G: 0
	ISO Setting	O	Auto
	Auto Aper. Shift	O	Off
	Switch Shooting Mode	O	-
	Macro	O	Macro Off
	Flash	O	Auto
	Self-Timer	×	Self-Timer Off
	Movie Size	O	640
	Frame Rate	O	30Frame/S
	Density	O	Normal
	Size (Text Mode)	O	4000(12M)
	MoveTarget	O	Off
Playback options	Volume setting for movies	O	-

O : setting is saved × : setting is reset

Type	Function		Default Settings
Items set with the setup menu	LCD Brightness	O	-
	Conversion Lens	O	Off
	Reg. My Settings	O	MY1
	Step Zoom	O	Off
	ISO Auto-High	O	AUTO 400
	Set Fn1 Button	O	AF/MF
	Set Fn2 Button	O	AE Lock
	Fn Set. My Set.	O	Off
	Operation Sounds	O	All
	Vol. Settings	O	■■□ (Medium)
	ADJ Lever Set. 1	O	Expo. Cmp
	ADJ Lever Set. 2	O	Wht. Bal.
	ADJ Lever Set. 3	O	ISO
	ADJ Lever Set. 4	O	Quality
	ADJ Shutter	O	Off
	Level Setting	O	Off
	AF Aux. Light	O	On
	Digital Zoom Img	O	Normal
	Auto Power Off	O	1 Min.
	Playback Screen	O	LCD
	LCD Confirm.	O	0.5 Sec.
	Auto Rotate	O	On
	CL-BKT B&W (TE)	O	On
	RAW/JPEG Setting	O	Fine
	Sequential No.	O	On
	Date Settings	O	-
	Language/言語	O	*
	Video Out Mode	O	*

* The default setting varies depending on where you purchased the camera.

Cautions on Use

Cautions on Use

- Should the product fail or malfunction while you are abroad, the manufacturer assumes no responsibility for servicing the product locally or bearing the expenditure incurred therefore.
- Be sure not to drop or apply any sudden force to the camera.
- While you are carrying the camera, be careful not to hit it against other objects. Take special care to not hit the lens and picture display.
- Firing the flash consecutively may heat the firing unit. Do not fire it consecutively more than necessary.
- Do not touch the flash and keep foreign objects away from the firing unit. Doing so can cause burns and fires.
- Do not fire the flash near eyes. It could cause visual impairment (particularly for infants).
- Do not fire the flash near the driver of a vehicle to avoid causing accidents.
- The batteries may become hot after extended use. Touching the batteries immediately after use could result in burns to your fingers.
- If the picture display or panel is exposed to sunlight, they may become washed out and images may become hard to view.
- The picture display and panel may contain some pixels that do not remain lit up continually in part or at all. Also, the brightness may become uneven because of the characteristics of LCDs. These are not failures.
- Do not forcefully press the surface of the picture display.
- In an environment where the temperature changes suddenly, condensation may occur in the camera, resulting in troubles such as fogging of the glass surface or malfunctions of the camera. If this occurs, place the camera in a bag to slow the temperature change as much as possible. Take it out of the bag after the temperature difference from the atmosphere has decreased to a fairly small amount. If condensation occurs, remove the battery and memory card, and wait until the moisture has dried before using the camera.
- To avoid damaging the connectors, do not put any objects into the camera's microphone or speaker holes.
- Do not get the camera wet. Do not operate the camera with wet hands. This can result in malfunction or an electrical shock.

Conditions in which condensation may easily occur----------

- When the camera is moved to an environment where the temperature differs greatly.
- In humid places.
- In a room immediately after being heated, or when the camera is exposed directly to cooled air from an air-conditioner or another similar appliance.

Care and Storage

Care

- Please note that if fingerprints, dirt, etc. get onto the lens, picture quality will suffer.
- When dust or dirt does get on the lens, do not touch it directly with your fingers, and either use a blower (available in stores) to blow it off, or a soft cloth to gently dust it off.
- After use at the beach or around chemicals, wipe it off particularly carefully.
- There are high voltage circuits in this camera. As this is dangerous, do not dismantle this camera under any circumstances.
- Do not get volatile substances, such as thinner, benzene, or pesticides on your camera. This may cause a change in quality, paint to peel, etc.
- As the surface of the picture display is easily scratched, do not rub hard objects against it.
- Clean the surface of the picture display by wiping gently with a soft cloth containing a small amount of display cleaner sold in stores.

Use and Storage

- Please avoid using or storing your camera in the following kinds of places, as this may damage the camera.
  In high heat and humidity, or where there is severe change in temperature or humidity.
  Places with a lot of dust, dirt or sand.
  Places with severe vibration.
  Places where it is in direct contact with vinyl or rubber products or chemicals, including mothballs or other insect repellent, for long periods of time.
  Places with strong magnetic fields (near a monitor, transformer, magnet, etc.).
- Remove the batteries if you are not going to use the camera for a long period of time.

Precautions regarding care of your camera

1. Be sure to turn the power off.
2. Remove the batteries or AC adapter before caring for your camera.

INFORMATION TO THE USER

USA FCC Part15 Class B

The equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, then user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help. (FCC 15.105B)

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. (FCC 15.21)
Properly shielded and grounded cables and connectors must be used for connection to a host computer in order to comply with FCC emission limits. (FCC 15.27)
An AC adapter with a ferrite core must be used for RF interference suppression.

COMPLIANCE INFORMATION STATEMENT

Product Name: DIGITAL CAMERA
Model Number: 2G
This device complies with Part 15 of the FCC Rules.
Operation is subject to the following two conditions:
(1) This device may cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.

TABATA USA INC.
2380 Mira Mar Avenue, Long Beach, CA 90815, U.S.A.
Phone: (562) 498-3708

Note to Users in Canada

Note: This Class B digital apparatus complies with Canadian ICES-003

Remarque Concernant les Utilisateurs au Canada

Avertissement : Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada
IMPORTANT SAFETY INSTRUCTIONS-SAVE THESE INSTRUCTIONS
DANGER-TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, CAREFULLY FOLLOW THESE INSTRUCTIONS.

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